Toro Grande Boulevard

Roadway Improvements – North

City of Cedar Park, Texas

Williamson County, Texas

WATER POLLUTION ABATEMENT PLAN

Prepared for:

The City of Cedar Park

Prepared by:

Cobb, Fendley & Associate, Inc.
9600 N. Mopac Expressway, Suite 800
Austin, Texas 78759

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.

4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: Toro Grande Blvd						**2. Regulated Entity No.:** N/A			
3. Customer Name: CITY OF CEDAR PARK						**4. Customer No.: CN 600407951**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**		6.11	
9. Application Fee:	$5,000.00		**10. Permanent BMP(s):**			Jellyfish JFPD0808-13-3			
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			Turkey Creek – Brushy Creek			

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	_X_
Region (1 req.)	___	___	_X_
County(ies)	___	___	_X_
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin _X_Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Julie Hastings
Print Name of Customer/Authorized Agent Julie Hastings 2/20/2025
Signature of Customer/Authorized Agent Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Julie Hastings

Date: 2/20/2025

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Toro Grande Blvd (RM1431 to New Hope Dr)
2. County: Williamson County
3. Stream Basin: Brazos River Basin
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Randall Lueders
   Entity: City of Cedar Park
   Mailing Address: 450 Cypress Creek Road
   City, State: Cedar Park, TX Zip: 78613
   Telephone: 512-401-5000 FAX: _____
   Email Address: engineering@cedarparktexas.gov

8. Agent/Representative (If any):

   Contact Person: Julie Hastings
   Entity: Cobb, Fendley & Associates, Inc.
   Mailing Address: 9600 N. Mopac Expressway, Suite 800
   City, State: Austin, TX Zip: 78759
   Telephone: 512-646-4323 FAX: _____
   Email Address: jhastings@cobbfendley.com

9. Project Location:

   ☒ The project site is located inside the city limits of Cedar Park.
   ☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
   ☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

    Toro Grande Blvd Improvements - North is located in the City of Cedar Park in Williamson County, Texas. The project begins at the intersection of Toro Grande Blvd and New Hope Dr and extends southeast for apporoximately 0.6 miles to the intersection of Ranch-to-Market (RM) 1431, where the project ends.

11. ☒ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

    ☒ Project site boundaries.
    ☒ USGS Quadrangle Name(s).
    ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
    ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

- ☒ Area of the site
- ☒ Offsite areas
- ☒ Impervious cover
- ☒ Permanent BMP(s)
- ☒ Proposed site use
- ☒ Site history
- ☒ Previous development
- ☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

- ☐ Existing commercial site
- ☐ Existing industrial site
- ☐ Existing residential site
- ☒ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☐ Undeveloped (Undisturbed/Uncleared)
- ☐ Other: _____

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

(2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

(3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

(4) The use of sewage holding tanks as parts of organized collection systems; and

(5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

(6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

- ☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- ☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- ☐ TCEQ cashier
- ☒ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046702
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

ATTACHMENT A - ROAD MAP

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

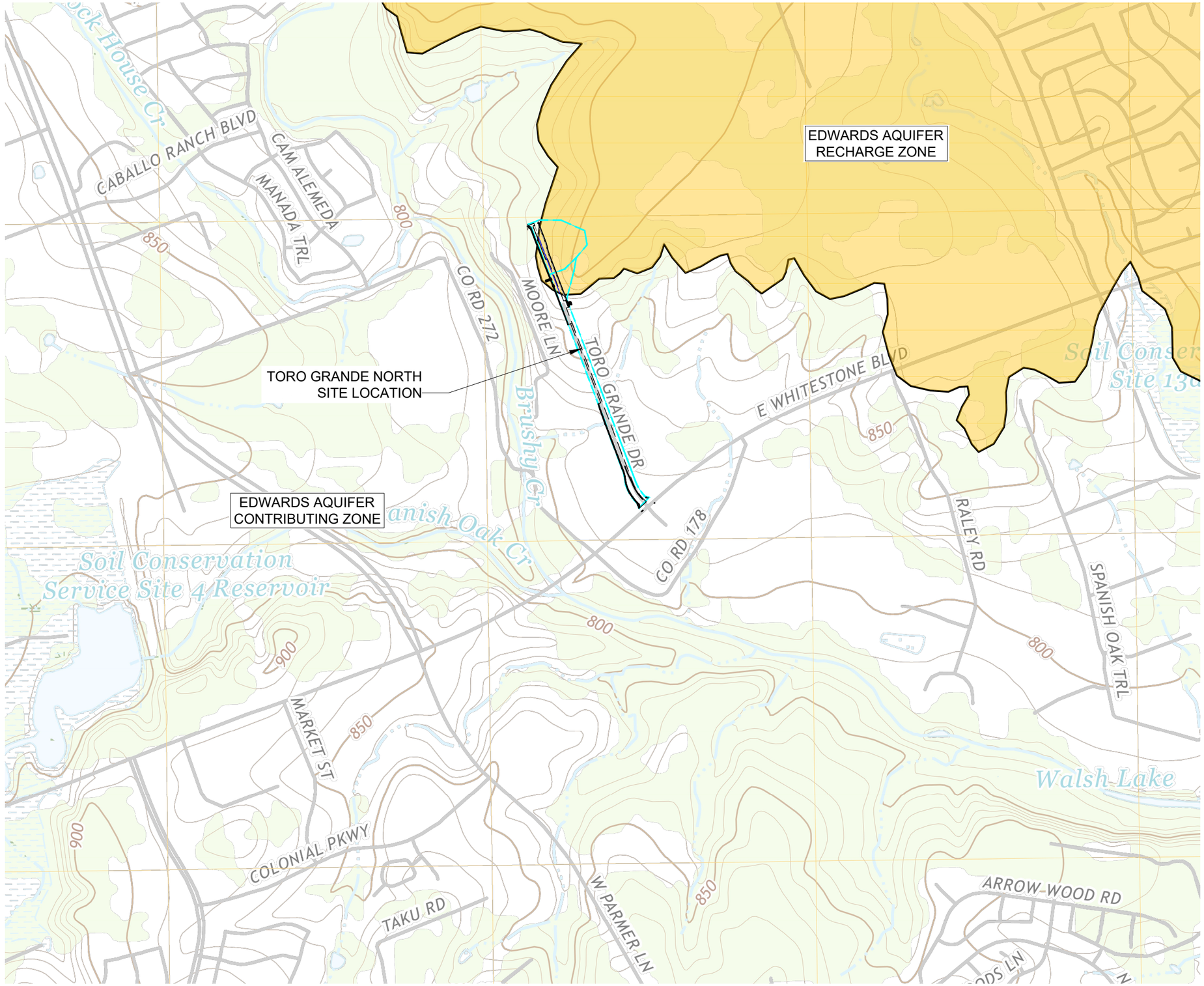
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 10/10/2024

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: JULIE D. HASTINGS
P.E. Serial No.: 88199
Date: 10/10/2024

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET



N

0 500' 1,000'

SCALE: 1" = 1,000'

LEGEND

- EDWARDS AQUIFER RECHARGE ZONE
- DRAINAGE PATH
- DRAINAGE AREA BOUNDARIES

BACKGROUND MAP: USGS
LEANDER QUADRANGLE
7.5-MINUTE SERIES

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9600 N. MOPAC EXPRESSWAY, SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

ATTACHMENT B -
USGS QUADRANGLE MAP

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 10/9/2024

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: JULIE D. HASTINGS
P.E. Serial No.: 88199
Date: 10/9/2024

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0587

ATTACHMENT C – PROJECT DESCRIPTION

The City of Cedar Park has commissioned the construction of the Toro Grande Blvd project from RM1431 to New Hope Drive. The project is located in the Edwards Aquifer Contributing and Recharge Zone. The construction involves pavement widening on Toro Grande Blvd. The 5-lane facility will include turn lanes, center lane medians, concrete sidewalks, concrete driveways, concrete curb and gutter, and base and asphalt pavement. The project will include the demolition of portions of Toro Grande Blvd center lane medians, concrete curb and gutter, and base and asphalt pavement. This proposed project is the ultimate condition roadway and there will be no interim conditions after construction is completed. The ROW area for the project in the Contributing and Recharge Zone is 6.11 acres and proposed impervious cover in the Contributing and Recharge Zones ROW equal to 5.64 acres, including existing and proposed pavement. A Contech Jellyfish Filter on STRM-E in DA-4 will be installed to mitigate the increase in pollutants in the stormwater due to the increase in pavement. This results in the following removal summary.

TORO GRANDE BLVD – TSS REMOVAL SUMMARY					
BASIN	**TOTAL AREA**	**EXISTING IMPERVIOUS AREA**	**PROPOSED IMPERVIOUS AREA**	**Lm (80% Required Removal)**	**TSS REMOVAL PROVIDED**
	AC	**AC**	**AC**	**LBS**	**LBS**
DA-4	5.47	2.87	4.55	1462	1,934
DA-5	4.74	0.69	1.09	348	0
Total	10.22	3.56	5.64	1810	1,934

Construction will include new roadway paving and culverts. During construction, temporary stormwater BMP measures will include silt fence, rock filter dam, and any other erosion measures as deemed necessary.

GEOLOGIC ASSESSMENT
FOR THE APPROXIMATELY 0.6-MILE
TORO GRANDE BOULEVARD
IMPROVEMENTS – NORTH PROJECT

Williamson County, Texas

June 2024

Prepared for:
City of Cedar Park
450 Cypress Creek Road
Cedar Park, Texas 78613

On Behalf of:
Cobb, Fendley & Associates, Inc.
505 E. Huntland Drive
Suite 485
Austin, Texas 78752

Prepared by:
aci environmental consulting
1001 Mopac Circle
Austin, Texas 78746
TBPG Firm License No. 50713

aci Project No.: 05-23-051

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

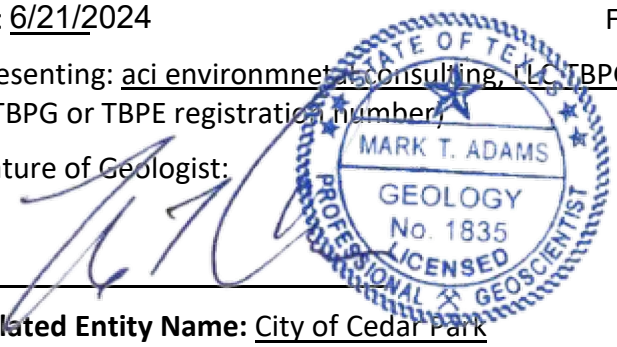
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Mark T. Adams Telephone: (512) 347-9000

Date: 6/21/2024 Fax: (512) 306-0974

Representing: aci environmental consulting, LLC TBPG License No. 50713 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: City of Cedar Park

Project Information

1. Date(s) Geologic Assessment was performed: 2/13/24
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
	See Section 4.0 of report	

** Soil Group Definitions (Abbreviated)*

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = 40'
   Site Geologic Map Scale: 1" = 40'
   Site Soils Map Scale (if more than 1 soil type): 1" = 500'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☒ There are 3 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☒ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

    ☐ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

TABLE OF CONTENTS

LIST OF ATTACHMENTS

June 2024

Geologic Assessment for the Toro Grande Boulevard Improvements – North Project located in Williamson County, Texas

1.0 INTRODUCTION

The Texas Commission on the Environmental Quality (TCEQ) regulates activities that have the potential to pollute the Edwards Aquifer through the Edwards Aquifer Protection Program. Projects meeting a certain criterion over the Edwards Aquifer Recharge Zone must submit an Edwards Aquifer Protection Plan (EAPP).

The purpose of this report is to identify all potential pathways for contaminant movement to the Edwards Aquifer and provide sufficient geologic information so that the appropriate Best Management Practices (BMPs) can be proposed in the Edwards Aquifer Protection Plan (EAPP). This report complies with the requirements of Title 30, Texas Administrative Code (TAC) Chapter 213 relating to the protection of the Edwards Aquifer Recharge Zone. Per the Rules, the Geologic Assessment must be completed by a Geologist licensed according to the Texas Geoscience Practice Act.

2.0 PROJECT INFORMATION

The limits of the Toro Grande Blvd Improvements – North Project are located in the City of Cedar Park in Williamson County, Texas. The proposed project begins at the intersection of Toro Grande Boulevard (Blvd) and New Hope Drive, which is under current construction, and extends south and west approximately 0.6 miles before connecting to Ranch-to-Market (RM) 1431, where the project terminates. Pedestrian investigations of the 9.39-acre tract were performed on February 13, 2024, by Andrew McGlothlin, G.I.T., Isaiah Galvan, and Keving Ramberg, under the supervision of Mark Adams, P.G. with **aci environmental consulting.**

This report is intended to satisfy the requirements for a Geologic Assessment, which shall be included as a component of a Water Pollution Abatement Plan (WPAP) and Sewage Collection System Plan (SCS). The site is approximately 9.39 acres in total. The proposed site use is for a roadway. The scope of the report consists of a site reconnaissance, field survey, and review of existing data and reports. Features identified during the field

survey were ranked utilizing the Texas Commission on Environmental Quality (TCEQ) matrix for Edwards Aquifer Recharge Zone features. The ranking of the features will determine their viability as "sensitive" features.

3.0 INVESTIGATION METHODS

The following investigation methods and activities were used to develop this report:

- Review of existing files and literature to determine the regional geology and any known caves associated with the project alignment;
- Review of past geological field reports, cave studies, and correspondence regarding the existing geologic features on the project alignment, if available;
- Site reconnaissance by a registered professional geologist to identify and examine caves, recharge features, and other significant geological structures;
- Evaluation of collected field data and a ranking of features using the TCEQ Ranking Table 0585 for the Edwards Aquifer Recharge Zone; and
- Review of historic aerial photographs to determine if there are any structural features present, and to determine any past disturbances on the project alignment.

4.0 SOILS AND GEOLOGY

The following includes a site-specific description of the soils, geologic stratigraphy, geologic structure, and karstic characteristics as they relate to the Edwards aquifer. Also included in this section is a review of historic aerials for presence of geologic changes or changes to manmade features in bedrock.

Soils

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (2024), three soil units occur within the project alignment (**Attachment A, Figure 2**):

1. Denton silty clay, 1 to 3 percent slopes (DnB)

The Denton component makes up 88 percent of the map unit. Slopes are 1 to 3 percent. This component is on hillslopes on dissected plateaus. The parent material consists of silty and clayey slope alluvium over residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 22 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water

to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric conditions. Hydrologic Soil Group: D.

2. Eckrant cobbly clay, 1 to 8 percent slopes (EaD)

The Eckrant component makes up 85 percent of the map unit. Slopes are 1 to 8 percent. This component is on ridges on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 4 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric criteria.

3. Fairlie clay, 1 to 2 percent slopes (FaB)

The Fairlie component makes up 100 percent of the map unit. Slopes are 1 to 2 percent. This component is on ridges on dissected plains. The parent material consists of residuum weathered from Austin chalk formation. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric criteria.

Geologic Stratigraphy

According to the *Geologic Map of the Leander Quadrangle, Texas*, three geologic units occur within the project alignment (**Attachment A, Figure 3**). These units and a description by Collins (1998) are as follows:

1. Quaternary terrace deposits (Qt)

"Gravel, sand, silt, and clay along streams and rivers. Mostly above flood level along entrenched streams and rivers. Larger deposits along San Gabriel River, Berry Creek, and Brushy Creek are as thick as 36 ft and locally may be thicker. Deposits of adjacent terraces at different elevations are mapped separately."

2. Edwards Limestone (Ked)
"Limestone, dolomitic limestone and marl. Massive to thin beds, chert, and fossiliferous; fossils include rudistids. Shallow subtidal to tidal-flat cycles. Honeycomb textures, voids in collapsed breccias, and cavern systems. Accounts for most of the Edwards aquifer strata. Thickness is between 100ft to 300ft; thins northward."

3. Comanche Peak Formation (Kc)
"Limestone and marl. Nodular, fossiliferous. Lower part of Edwards aquifer strata. Thickens northward from ~40 to 70 ft."

Site-Specific Stratigraphic Column

Formation	Members	Thickness (Collins, 1998)
Quaternary terrace deposits	Quaternary terrace deposits	0-36 feet
Disconformity: Erosional		
Edwards Limestone	Edwards Limestone	0-100 feet
Comanche Peak Formation	Comanche Peak Formation	40-70 feet

Geologic Structure
The geologic strata associated with the Edwards Aquifer include the Georgetown Limestone Formation of the Washita Group, the Edwards Limestone Group which is interfingered with the Comanche Peak Formation, followed by the Walnut formation, and finally the Glen Rose Formation of the Trinity Group. These Groups dip gently to the southeast and are a characterized by the Balcones Fault Escarpment, a zone of en echelon normal faults downthrown to the southeast. Locally, the dominant structural trend of faults within the area is 35°, as evidenced by the mapped fault patterns (**Attachment A, Figure 4**). Thus, all features that have a trend ranging from 20° to 50° are considered "on trend" and were awarded the additional 10 points in the Geologic Assessment Table.

Karstic Characteristics

In limestone landscapes, karst is expressed by erratically developed cavernous porosity from dissolution of bedrock as water combined with weak acids moves through the subsurface. Karst terrains are typical of the Edwards Limestone, occurring across a vast region of Central Texas, including the Balcones Fault Escarpment. The features produced by karst processes include, but are not limited to, sinkholes, solution cavities, solution enlarged fractures, and caves. These features can eventually provide conduits for fluid movement such as surface water runoff, as "point recharge" to the Edwards Aquifer. Faults and manmade features within bedrock can also provide conduits for point recharge in many cases.

According to Edwards aquifer zone map produced by the TCEQ (2005), the majority of the project alignment is within the Edwards Aquifer Contributing Zone. Approximately 1.2 acres in the north portion of the project alignment are within the Edwards Aquifer Recharge Zone. Thus, all karst features identified as sensitive within this 1.2-acre area have the potential to be point recharge features into the Edwards aquifer.

Review of Historic Aerials

Since before the first historic aerial in 1941, it appears the site has been largely undeveloped, with some clearing for ranching and agricultural activities. Few changes occur between the 1941 aerial up to the 1995 aerial, which shows the construction of Toro Grande Blvd along with some rural residences. The 2004 aerial shows the first commercial development on the east side of Toro Grande Blvd. The 2014 aerial shows the first commercial development on the west side of Toro Grande Blvd. Commercial developments continue to appear through the 2019 aerial.

5.0 SUMMARY OF FINDINGS

This report documents the findings of a geologic assessment conducted by **aci environmental consulting** personnel on February 13, 2024. Five manmade features in bedrock were noted within 50 feet of the project alignment. Three of these features are geotechnical test holes. Additionally, existing subsurface utility infrastructure is present within the project alignment. See **Figure 5** for the location of these utilities. There were no naturally occurring karst features on the site identified during field investigations. Additional details can be found in **Attachment B**.

6.0 REFERENCES

Collins, E.W., 1998. *Geologic Map of the Leander Quadrangle, Texas*. Bureau of Economic Geology. Austin, Texas. Scale 1:24,000.

(TCEQ) Texas Commission on Environmental Quality. 2004. Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones. October 1, 2004. Austin, Texas.

(TCEQ) Texas Commission on Environmental Quality. 2005. "Edwards Aquifer Protection Program, Chapter 213 Rules - Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone." Map. Digital data. September 1, 2005. Austin, Texas.

(TWDB) Texas Water Development Board. 2024. Water Data Interactive Groundwater Data Viewer. Accessed on June 10, 2024. Available at: http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer

(USDA NRCS) U.S. Department of Agriculture Natural Resources Conservation Service. 2024. WebSoilSurvey.com. Soil Survey Area: Williamson County, Texas. Date accessed: July 10, 2024.

ATTACHMENT A

Site Maps

P:\Project Folders\05-23-051 Toro Grande North & South\GIS\Maps\Task_2g_GA\GA_figures\GA_figures.aprx

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

500 250 0 500 Feet

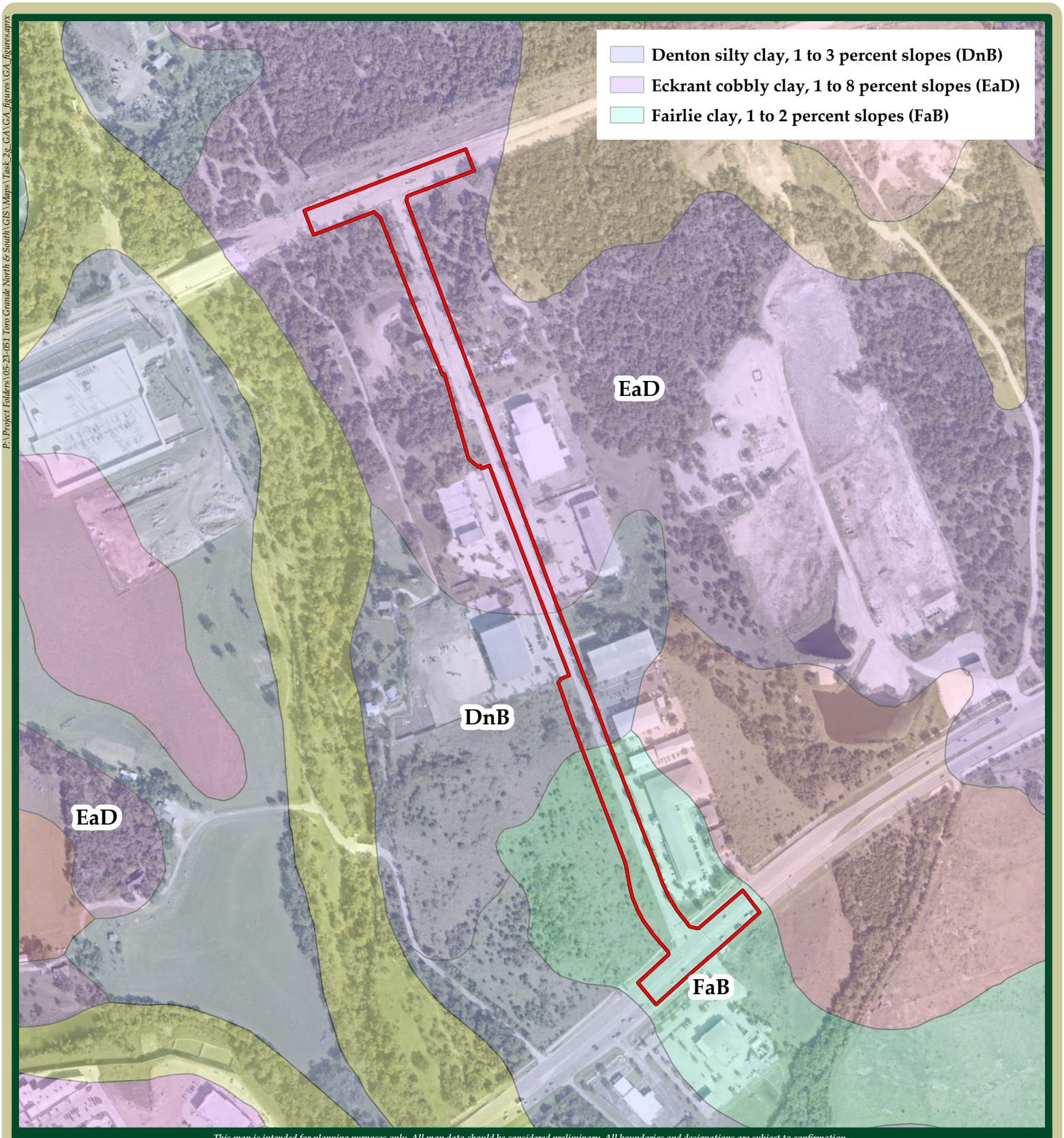
1:6,000 1 inch = 500 feet

Project Alignment

aci env

Toro Grande Boulevard Improvements - North **aci Project No.: 05-23-051**

Figure 1: Project Alignment Location **June 2024**



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

500 250 0 500 Feet

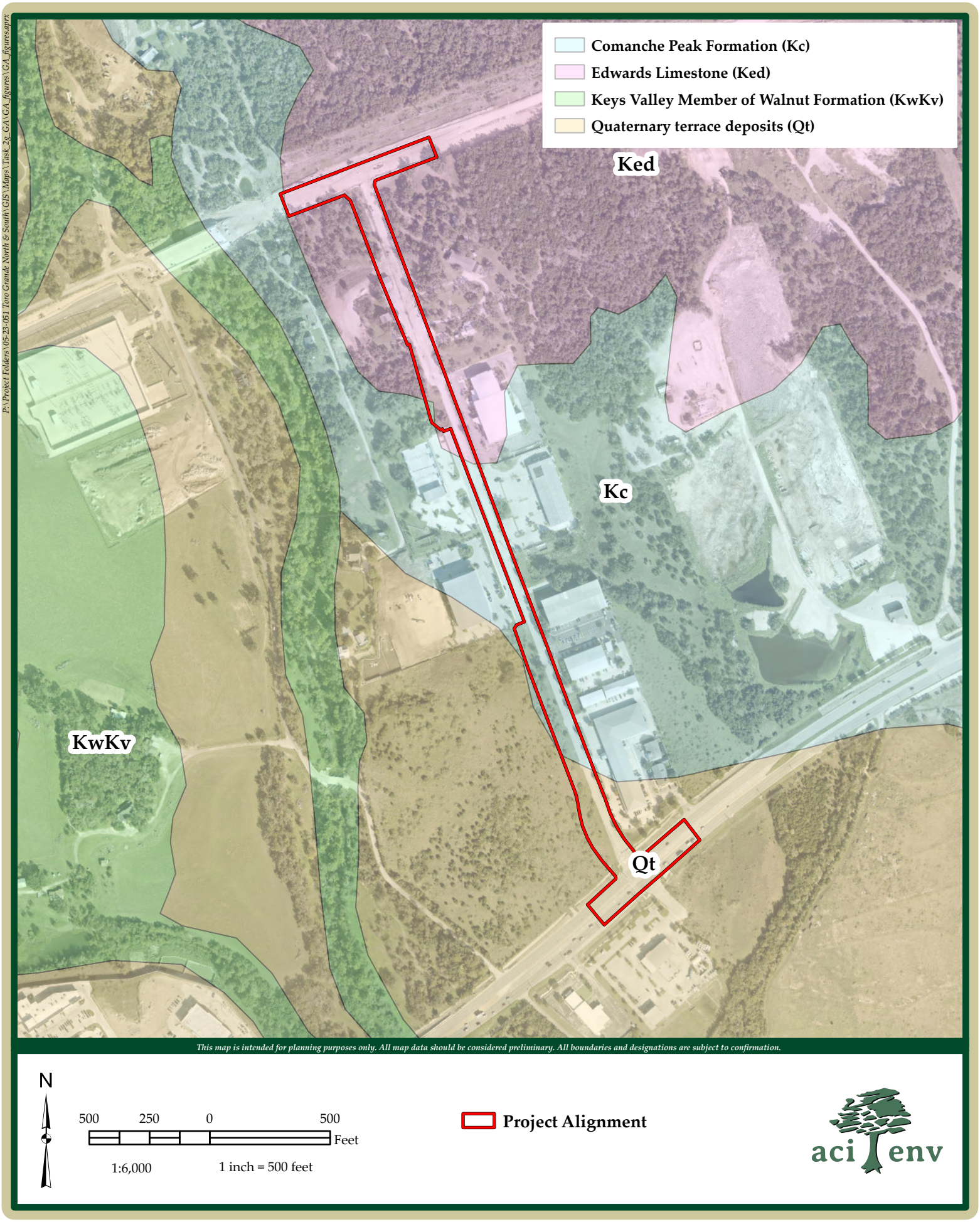
1:6,000 1 inch = 500 feet

Project Alignment

aci env

Toro Grande Boulevard Improvements - North **aci Project No.: 05-23-051**

Figure 2: Project Alignment Soils **June 2024**

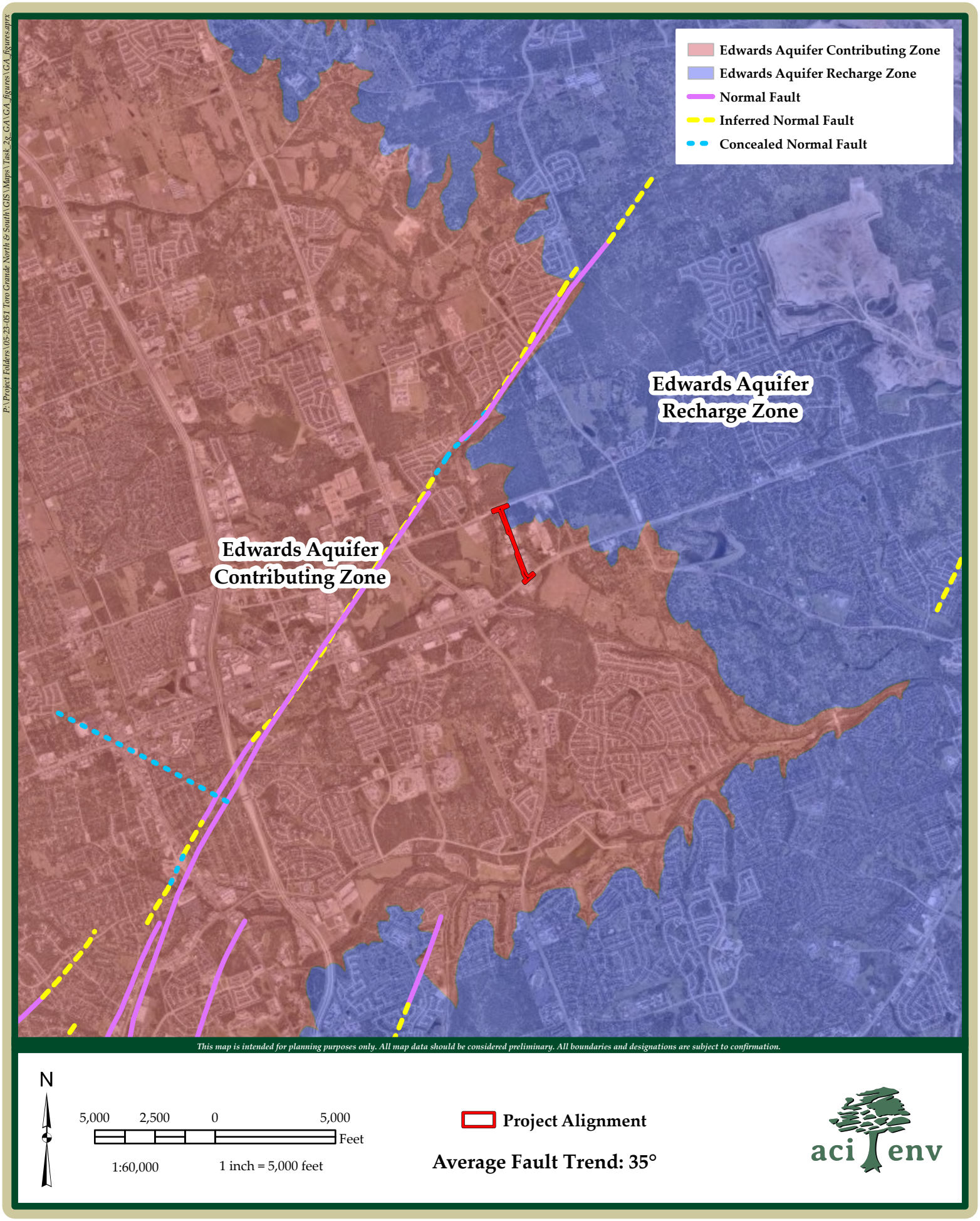


Toro Grande Boulevard Improvements - North

aci Project No.: 05-23-051

Figure 3: Site Geology Map

June 2024



Toro Grande Boulevard Improvements - North

aci Project No.: 05-23-051

Figure 4: Regional Trend Map

June 2024

ATTACHMENT B

Geologic Table
Geologic and Manmade Feature Map (Figure 5)
Feature Descriptions and Recommendations

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Toro Grande Boulevard Improvements - North

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
MB-01	30.545359	-97.778317	MB	30	Ked	50	50	20	-	-	-	-	-	10	40		X	X		Hillside
MB-02	30.5455	-97.778242	MB	30	Ked	4	4	-	-	-	-	-	-	10	40		X	X		Hillside
B-1	30.5467093	-97.778823	MB	30	Ked	-	-	-	-	-	-	-	-	10	40		X	X		Hillside
B-2	30.543588	-97.777522	MB	30	Ked	-	-	-	-	-	-	-	-	10	40		X	X		Hillside
B-3	30.5408948	-97.776407	MB	30	Kc	-	-	-	-	-	-	-	-	10	40		X	X		Hillside

* DATUM: NAD 1983 State Plane 4203

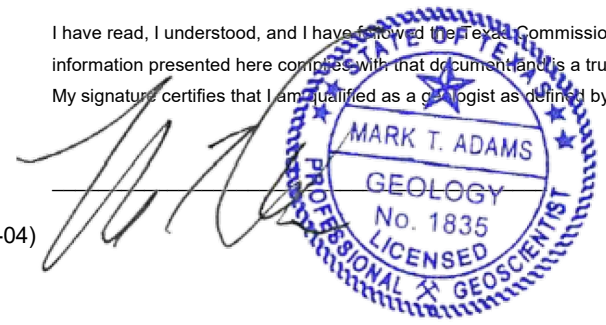
2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

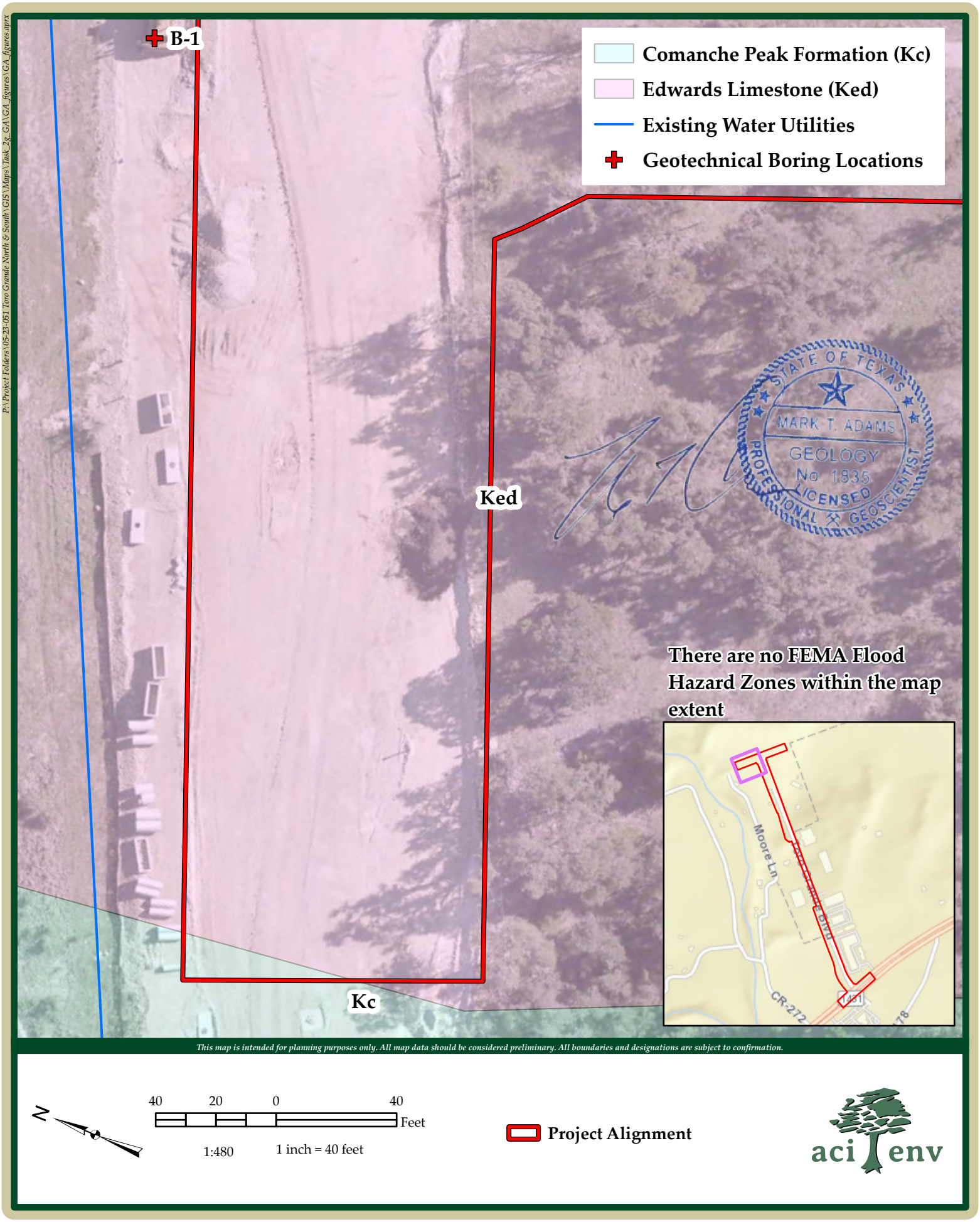
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.



Date 6/21/2024

Sheet __1___ of __1____

TCEQ-0585-Table (Rev. 10-01-04)



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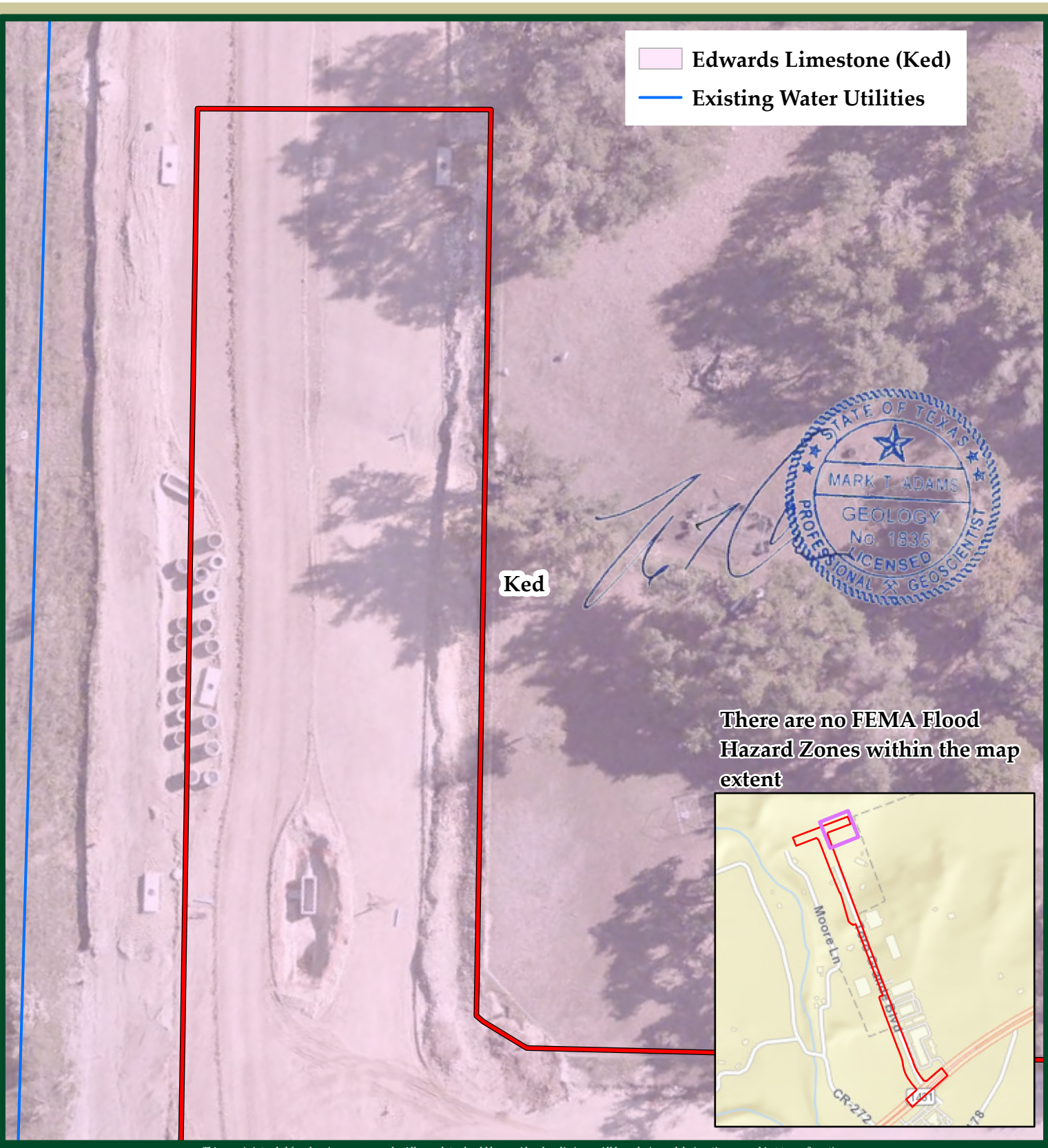
Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024



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N

40 20 0 40 Feet

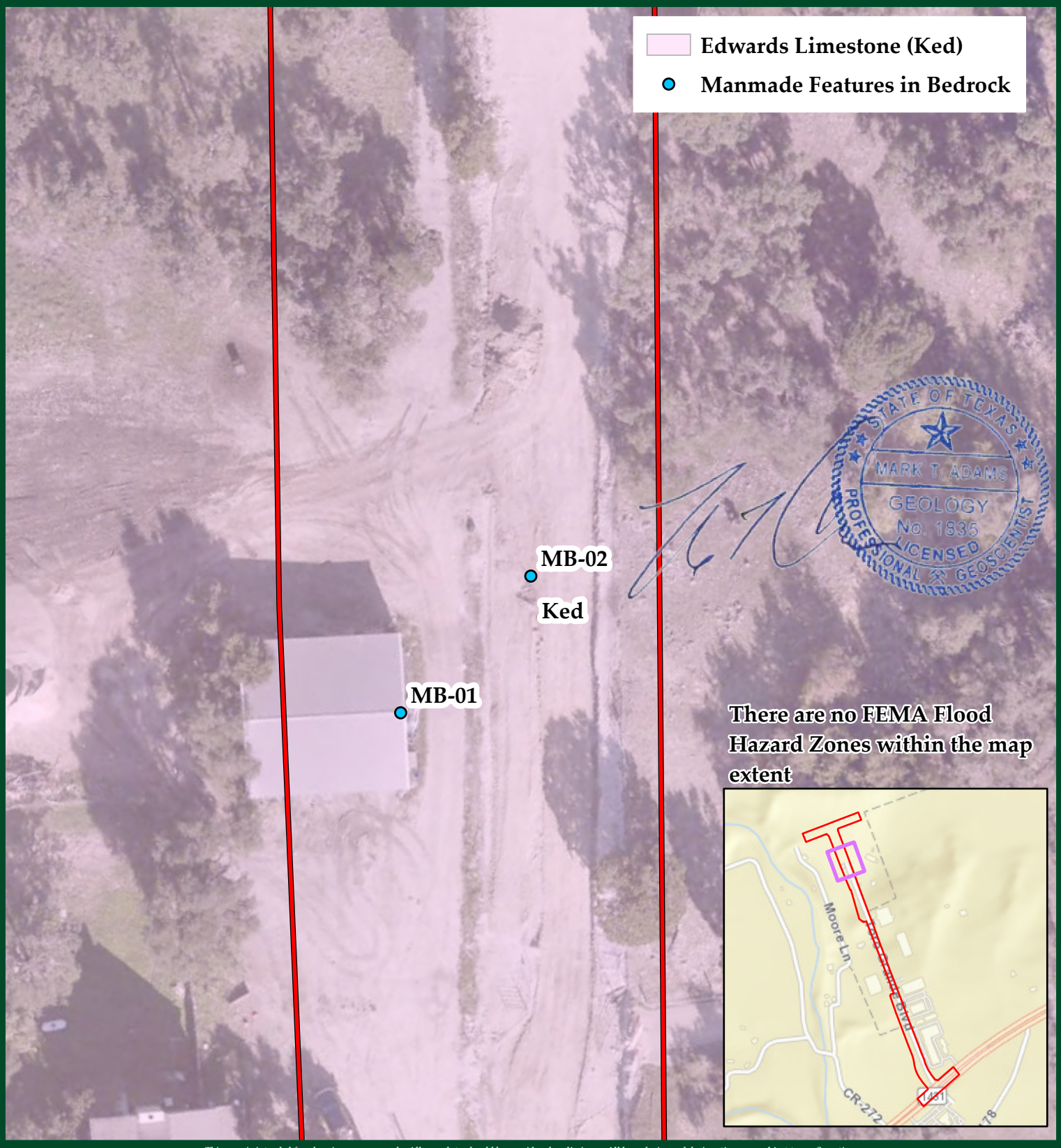
1:480 1 inch = 40 feet

Project Alignment

aci env

Toro Grande Boulevard Improvements - North **Page 2 of 12** **aci Project No.: 05-23-051**

Figure 5: Geologic and Manmade Features **June 2024**



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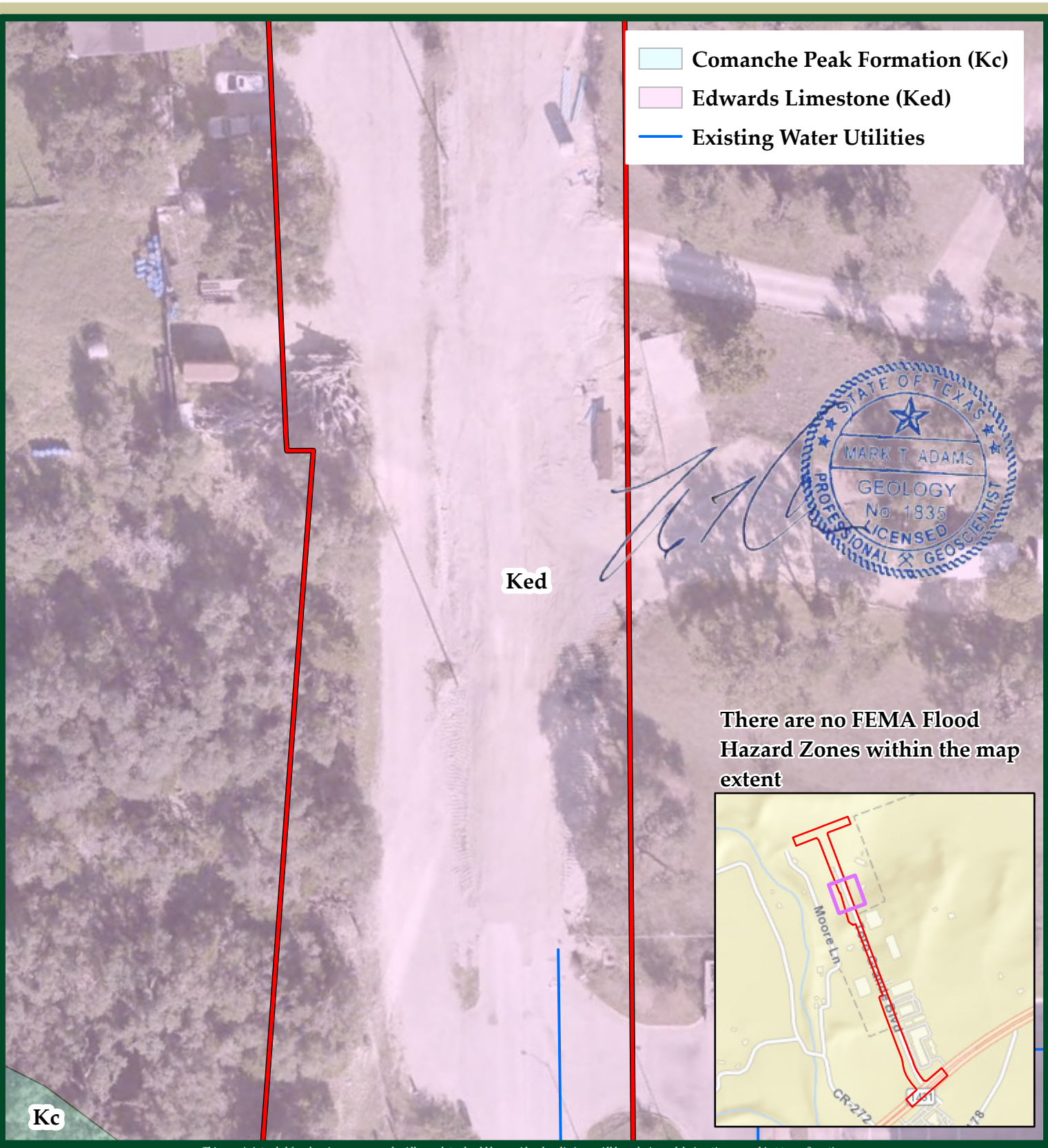
1:480 1 inch = 40 feet

Project Alignment

aci env



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Project Alignment

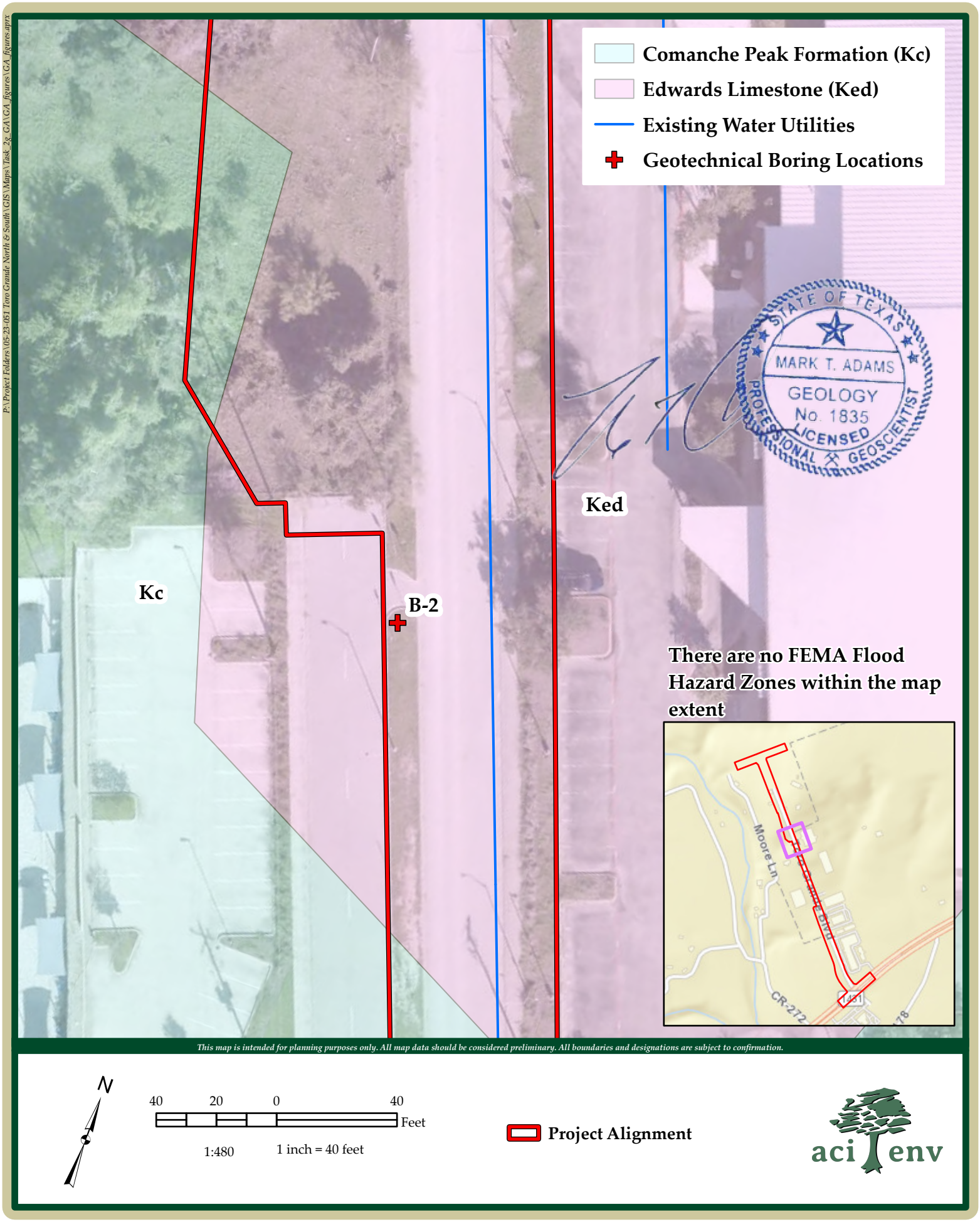
aci env

Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024



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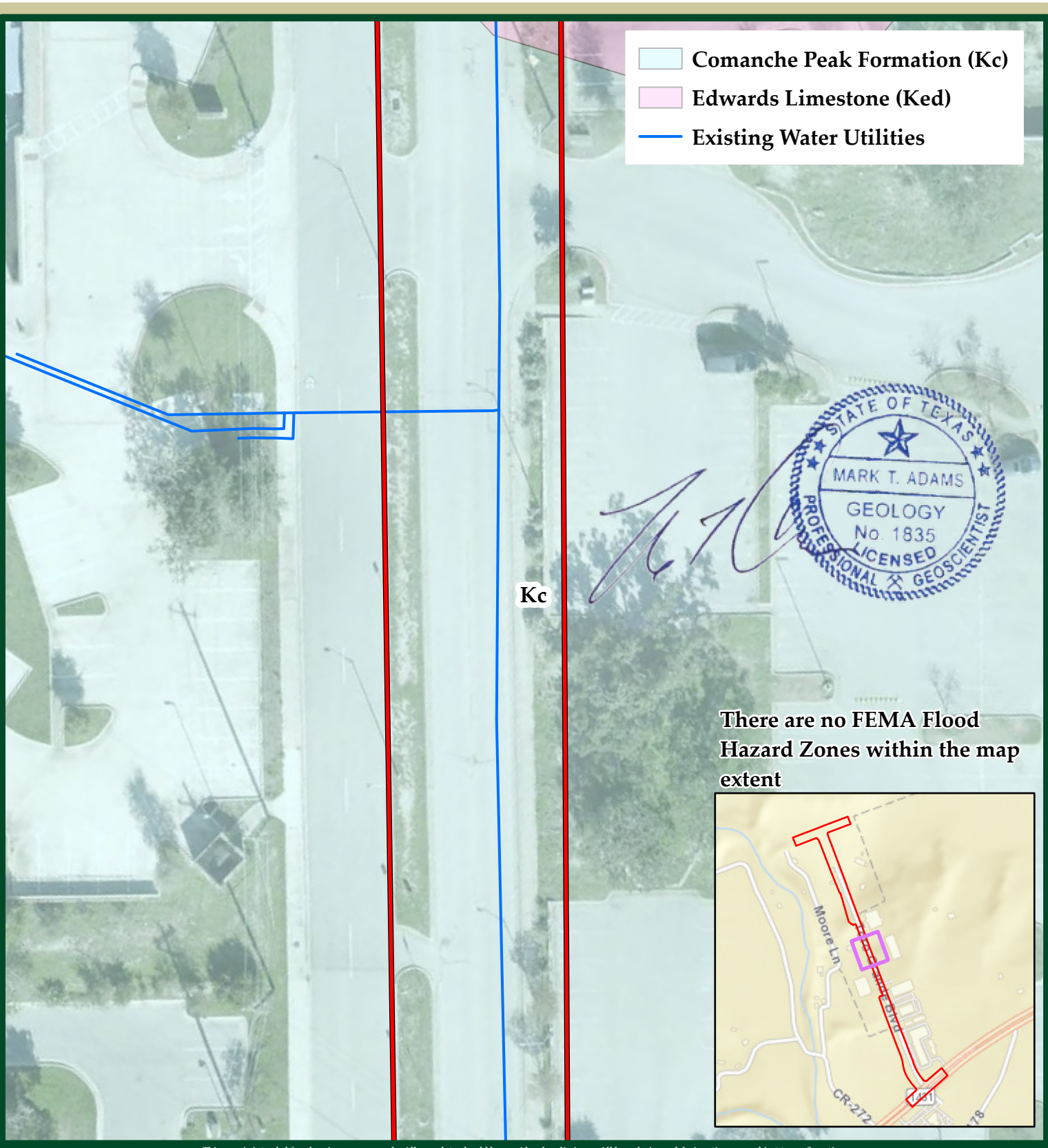
Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024



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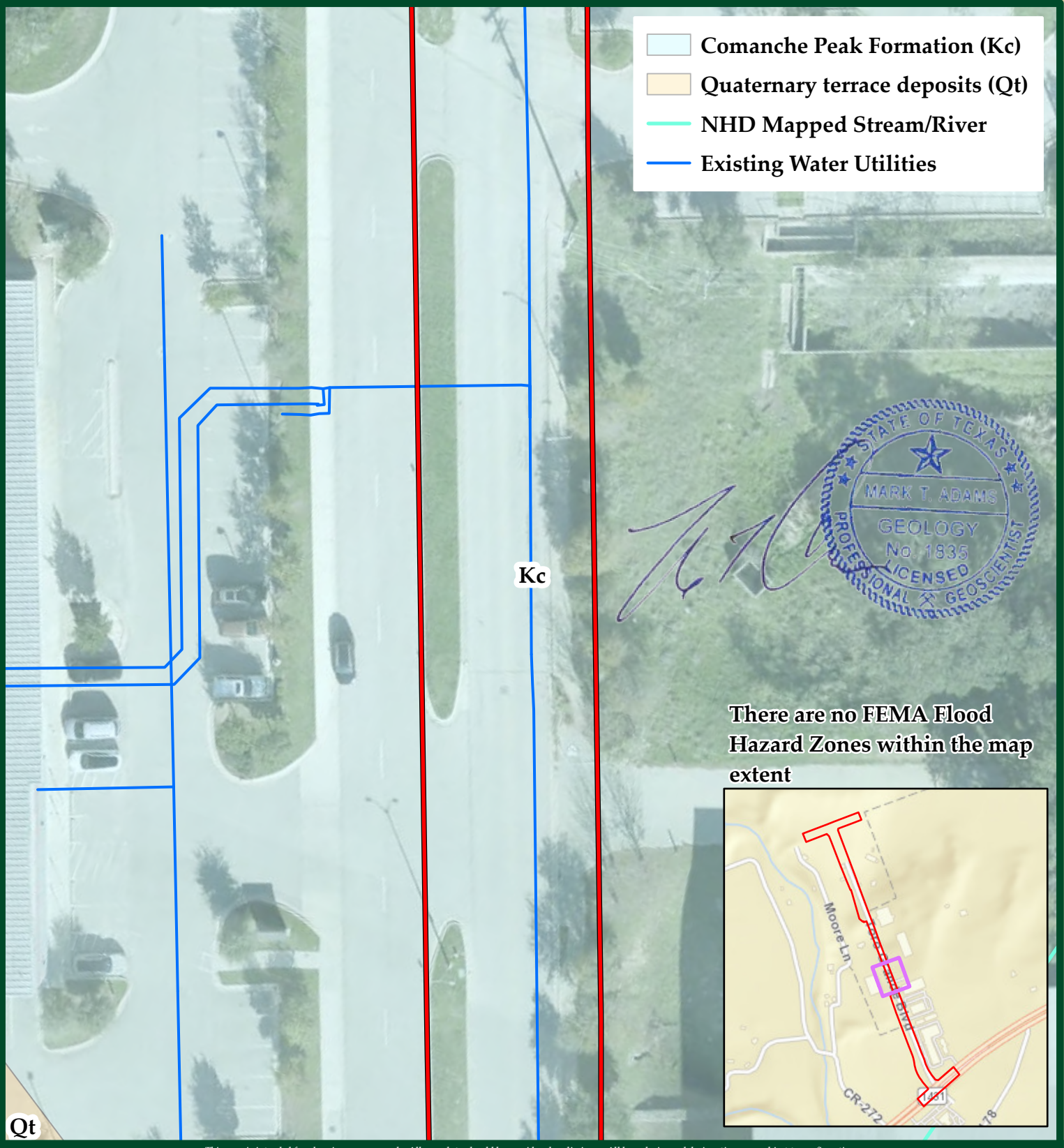
1:480 1 inch = 40 feet

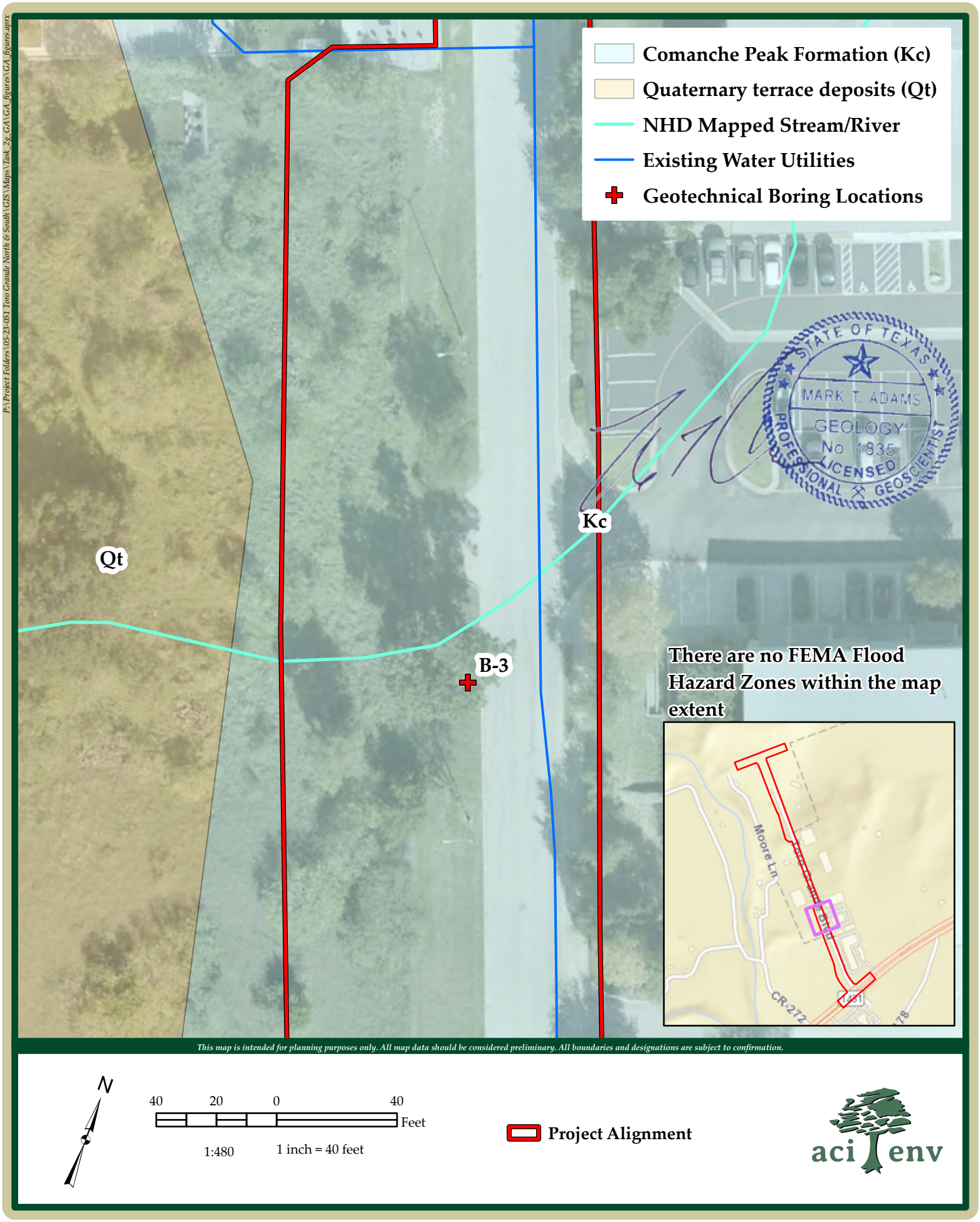
Project Alignment

aci env

Toro Grande Boulevard Improvements - North **Page 6 of 12** **aci Project No.: 05-23-051**

Figure 5: Geologic and Manmade Features **June 2024**





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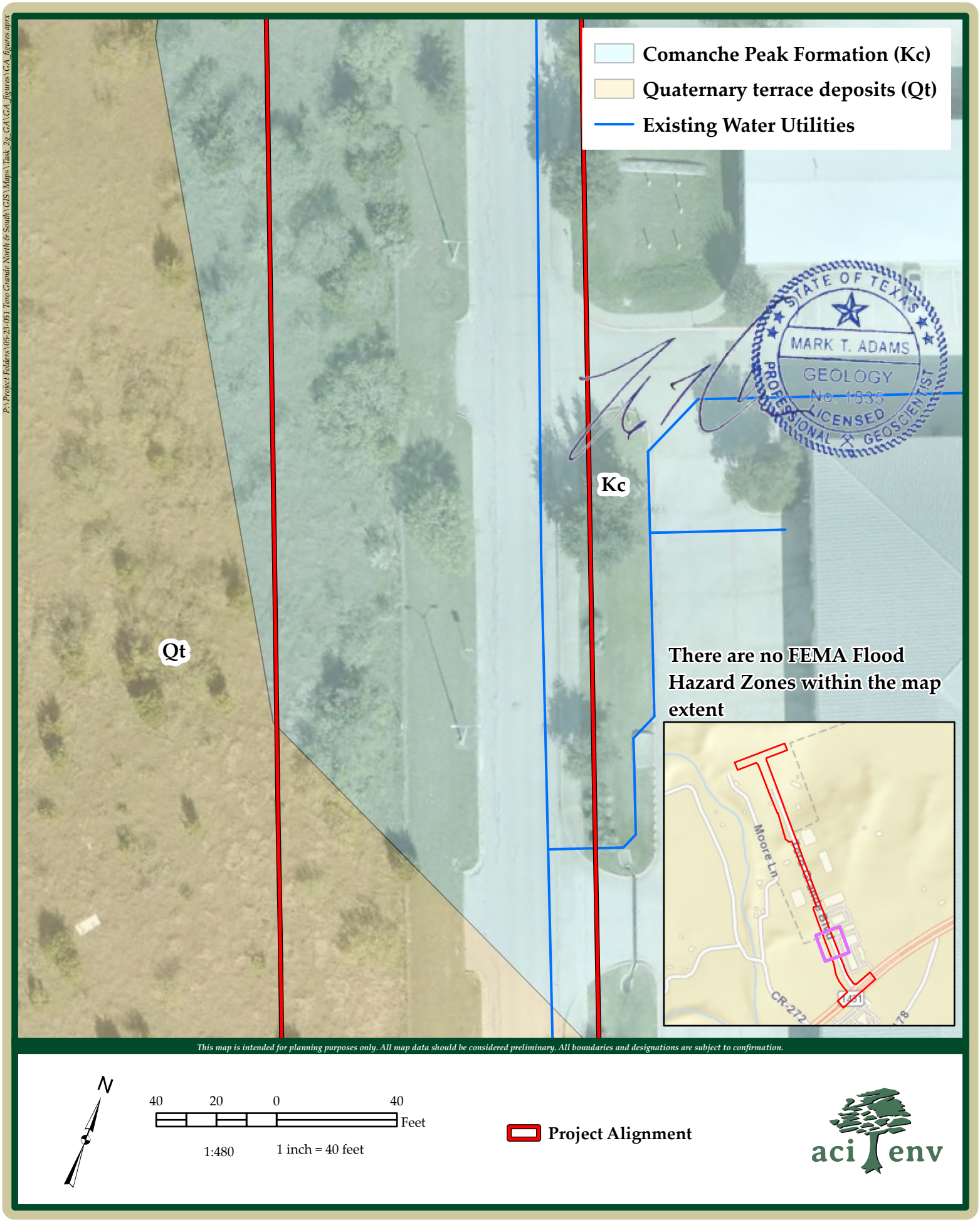

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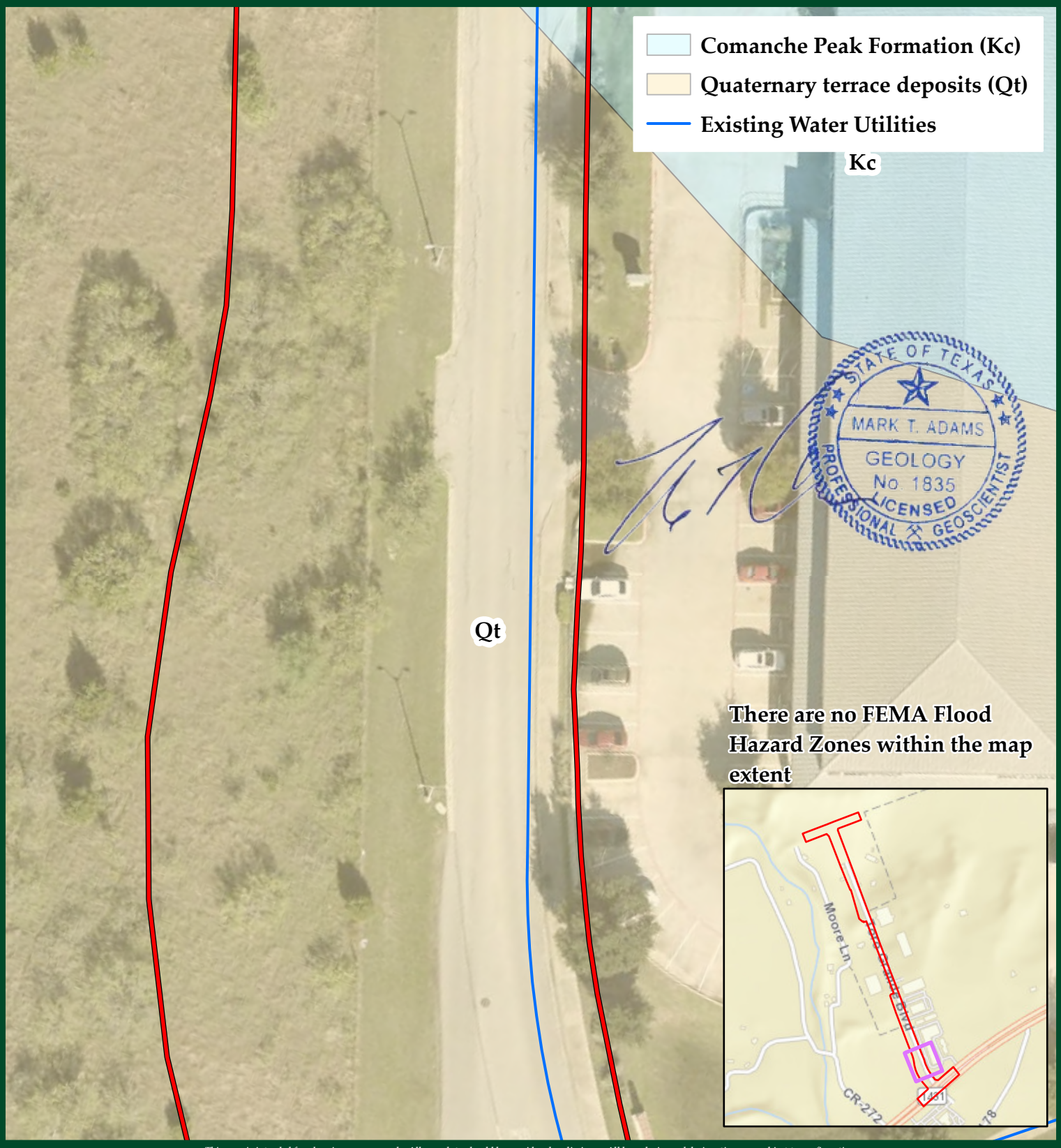
Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024



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N

40 20 0 40 Feet

1:480 1 inch = 40 feet

Project Alignment

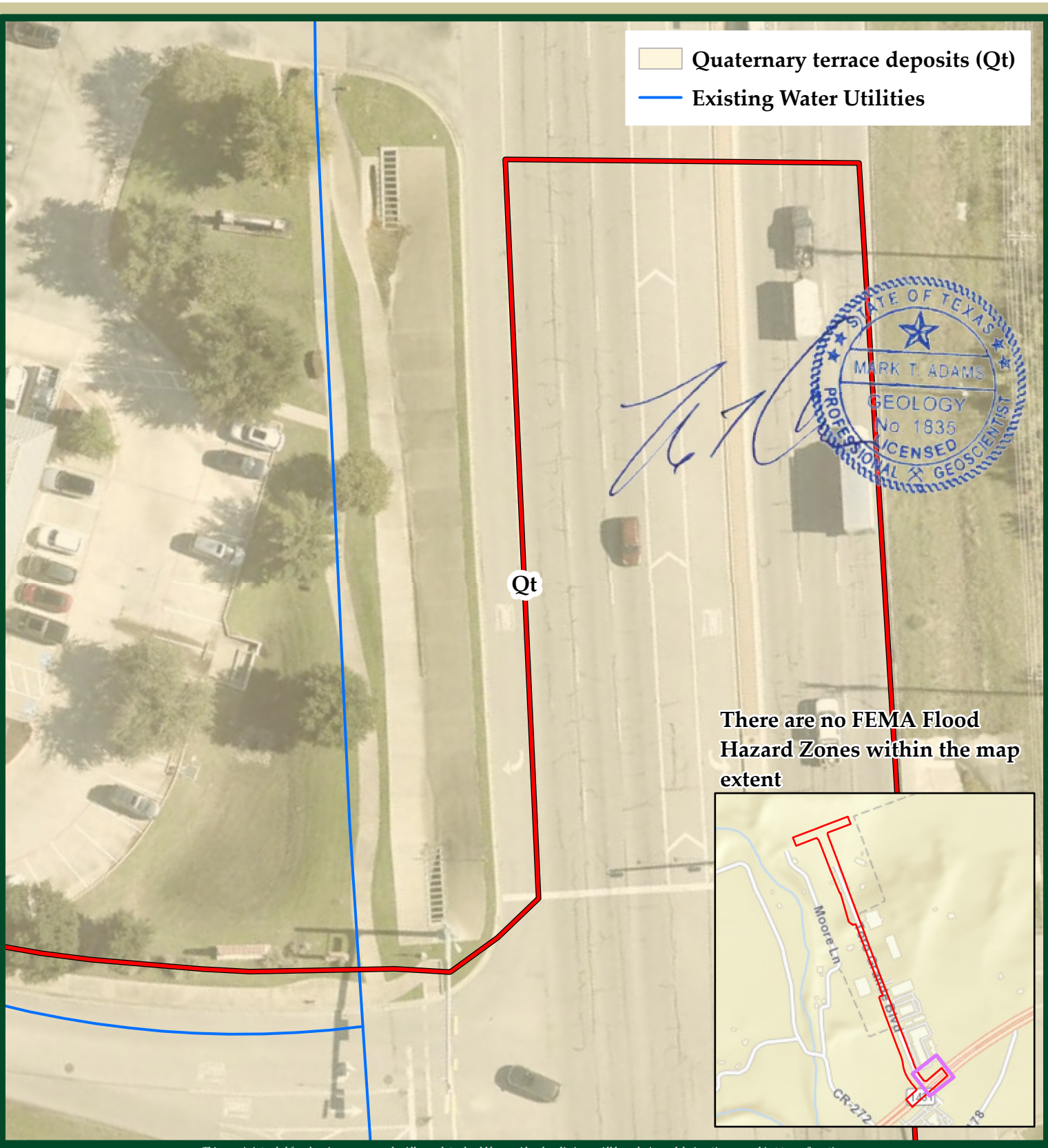
aci env

Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024



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N

40 20 0 40 Feet

1:480 1 inch = 40 feet

Project Alignment

aci env

Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024

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Toro Grande Boulevard Improvements - North

Figure 5: Geologic and Manmade Features

aci Project No.: 05-23-051

June 2024

MB-01
GPS: 30.545359, -97.778317
This feature is a manmade feature in bedrock, a metal structure, approximately 50 feet, 50 feet wide, and 20 feet tall. This feature is located in the Edwards Limestone formation and is positioned on a gently sloping hillside. Infill material is unknown. The drainage area for this feature is less than 1.6 acres. The relative infiltration rate for this feature has been determined to be low and assigned a point value of 10. This feature has been given a total sensitivity rating of 40 points and deemed sensitive for the sole purpose of bringing it to the attention of the engineer.

Recommendation: No setbacks are required for this feature; however, this feature should be brought to the attention of the engineer.

Photo of MB-01

MB-02

GPS: 30.545500, -97.778242

This feature is a manmade feature in bedrock, a manhole, approximately 4 feet in diameter. This feature is located in the Edwards Limestone formation and is positioned on a gently sloping hillside. Infill material is unknown. The drainage area for this feature is less than 1.6 acres. The relative infiltration rate for this feature has been determined to be low and assigned a point value of 10. This feature has been given a total sensitivity rating of 40 points and deemed sensitive for the sole purpose of bringing it to the attention of the engineer.

Recommendation: No setbacks are required for this feature; however, this feature should be brought to the attention of the engineer.

Photo of MB-02

B-1

GPS: 30.546709, -97.778823

This feature is a manmade feature in bedrock, a geotechnical test hole. The dimensions are unknown. This feature is located in the Edwards Limestone formation and is positioned on a gently sloping hillside. Infill material is unknown. The drainage area for this feature is less than 1.6 acres. The relative infiltration rate for this feature has been determined to be low and assigned a point value of 10. This feature has been given a total sensitivity rating of 40 points and deemed sensitive for the sole purpose of bringing it to the attention of the engineer.

Recommendation: No setbacks are required for this feature; however, this feature should be brought to the attention of the engineer.

No Photo Available

B-2

GPS: 30.543588, -97.777522

This feature is a manmade feature in bedrock, a geotechnical test hole. The dimensions are unknown. This feature is located in the Edwards Limestone formation and is positioned on a gently sloping hillside. Infill material is unknown. The drainage area for this feature is less than 1.6 acres. The relative infiltration rate for this feature has been determined to be low and assigned a point value of 10. This feature has been given a total sensitivity rating of 40 points and deemed sensitive for the sole purpose of bringing it to the attention of the engineer.

Recommendation: No setbacks are required for this feature; however, this feature should be brought to the attention of the engineer.

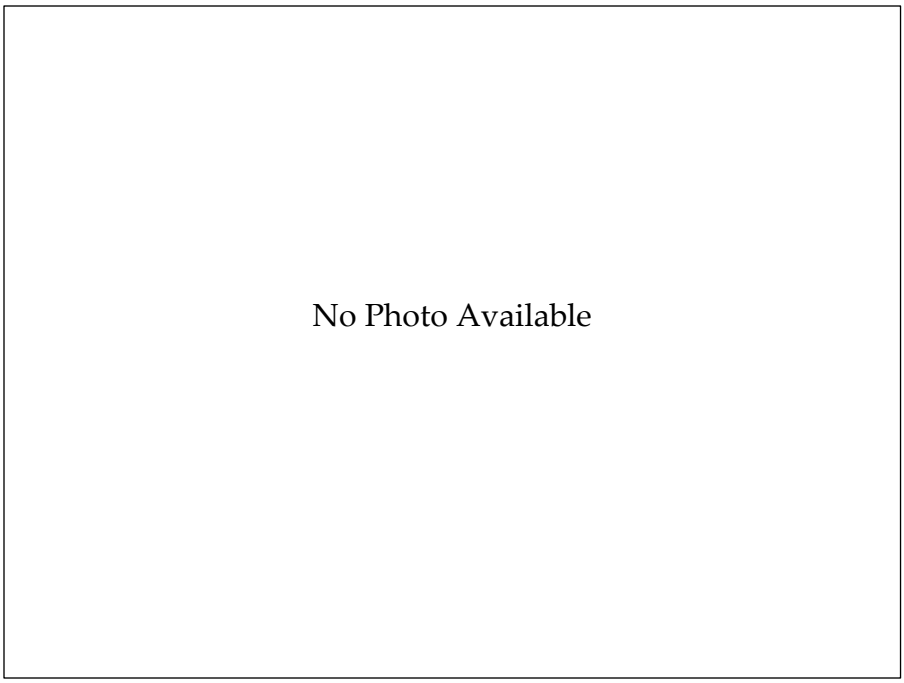
No Photo Available

B-3

GPS: 30.540895, -97.776407

This feature is a manmade feature in bedrock, a geotechnical test hole. The dimensions are unknown. This feature is located in the Comanche Peak Limestone formation and is positioned on a gently sloping hillside. Infill material is unknown. The drainage area for this feature is less than 1.6 acres. The relative infiltration rate for this feature has been determined to be low and assigned a point value of 10. This feature has been given a total sensitivity rating of 40 points and deemed sensitive for the sole purpose of bringing it to the attention of the engineer.

Recommendation: No setbacks are required for this feature; however, this feature should be brought to the attention of the engineer.



ATTACHMENT C

Historic Aerial Photographs

Prepared for:

ACI CONSULTING
1001 Mopac Circle
Austin TX 78746

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Historical Aerial Photographs

New Hope Drive Phase 2

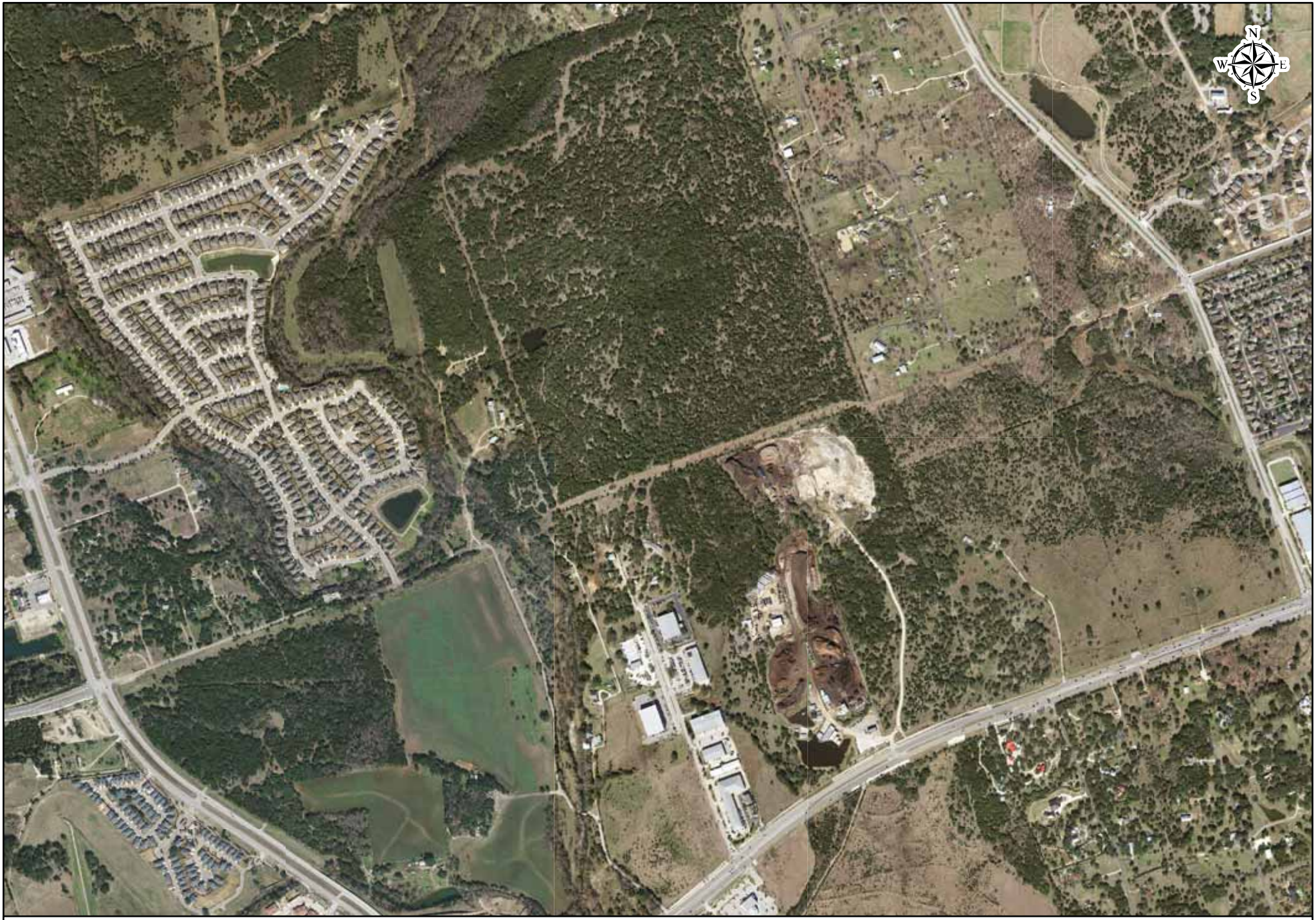
Cedar Park, TX

Williamson County

PO #: 05-18-041

ES-132477

Thursday, November 14, 2019



Date: 2019
Source: TNRIS

Feet
0 500 1,000 2,000

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 2014
Source: USDA

Feet
0 500 1,000 2,000

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 2008
Source: USDA

Feet
0 500 1,000 2,000

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 2004
Source: USDA

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1995
Source: USGS

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1981
Source: USGS

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1970
Source: NASA

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1962
Source: USGS

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1953
Source: AMS

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1941
Source: ASCS

0 500 1,000 2,000 Feet

BANKS
ENVIRONMENTAL DATA
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AERIAL SOURCE DEFINITIONS

Acronym	Agency
NASA	National Aeronautics & Space Administration
AMS	Army Mapping Service
ASCS	Agricultural Stabilization & Conservation Service
SCS	Soil Conservation Service
ISGS	Illinois State Geological Survey
Fairchild	Fairchild Aerial Surveys
TXDOT	Texas Department of Transportation
BLM	Bureau of Land Management
USAF	United States Air Force
USCOE	United States Corps of Engineers
USDA	United States Department of Agriculture
USGS	United States Geological Survey
WALLACE	Wallace-Zingery Aerial Surveys
TNRIS	Texas Natural Resources Information System

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Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Julie Hastings

Date: 2/20/2025

Signature of Customer/Agent:

Regulated Entity Name: Toro Grande Blvd (RM1431 to New Hope Dr)

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☒ Other:Roadway

2. Total site acreage (size of property):6.11

3. Estimated projected population:N/A

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	N/A	÷ 43,560 =	N/A
Parking	N/A	÷ 43,560 =	N/A
Other paved surfaces	245,678	÷ 43,560 =	5.64
Total Impervious Cover	245,678	÷ 43,560 =	5.64

Total Impervious Cover 5.64 **÷ Total Acreage** 10.22 **X 100 =** 55.2**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

☐ TXDOT road project.
☐ County road or roads built to county specifications.
☒ City thoroughfare or roads to be dedicated to a municipality.
☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

☐ Concrete
☒ Asphaltic concrete pavement
☐ Other: _____

9. Length of Right of Way (R.O.W.): 3,018 feet.

Width of R.O.W.: Varies feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = 6.11 acres.

10. Length of pavement area: 3,018 feet.

Width of pavement area: Varies feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area 5.64 acres ÷ R.O.W. area 6.11 acres x 100 = 92.3% impervious cover.

11. ☐ A rest stop will be included in this project.

☒ A rest stop will not be included in this project.

12. ☒ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. ☒ **Attachment B - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

_____% Domestic	_____Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	_____Gallons/day
TOTAL gallons/day _____	

15. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

- ☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.
- ☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

- ☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
- ☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

- ☐ The SCS was previously submitted on_____.
- ☐ The SCS was submitted with this application.
- ☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☐ The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is:

☐ Existing.
☐ Proposed.

16. ☐ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 400'.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☐ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): _____

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

☒ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☒ There are 3 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☒ The wells are not in use and have been properly abandoned.
☐ The wells are not in use and will be properly abandoned.
☐ The wells are in use and comply with 16 TAC §76.

☐ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☒ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☐ No sensitive geologic or manmade features were identified in the Geologic Assessment.
☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

23. ☒ Areas of soil disturbance and areas which will not be disturbed.

24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. ☒ Locations where soil stabilization practices are expected to occur.

26. ☒ Surface waters (including wetlands).

☐ N/A

27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

☐ There will be no discharges to surface water or sensitive features.

28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ-0584

ATTACHMENT A – FACTORS AFFECTING SURFACE WATER QUALITY

I. Major Soil Disturbing Activities Include:

1. Install erosion and sediment control BMPs down-slope of work area and initiate inspection and maintenance activities.

2. Begin phased construction with interim stabilization practices. Adjust erosion and sedimentation controls during construction to meet requirements and changing conditions and as directed/approved by the Environmental Compliance Inspector or Environmental Compliance Manager.

3. Major soil disturbing activities may include but are not limited to: right-of-way preparation, cut and/or fill, paving operations, final grading and placement of topsoil and the following:
    - Clearing and Grubbing
    - Placement of road base
    - Ditch and roadway grading
    - Installation of storm drain systems

II. Potential sources of contamination associated with the construction phase of this project that could affect storm water quality are listed as follows:

- Runoff and erosion of sediment and pollutants from exposed soil due to site preparation, including grading, excavation, and clearing vegetation.
- Oil and Grease from runoff pollutants associated with paving.
- Construction sewage leaks from sanitary facilities including portable bathrooms and wastewater storage tanks for field office sanitary facilities.
- Gasoline, engine coolant, transmission fluid, etc. from leaks or spills associated with vehicle use on site.
- Sediment and high pH runoff caused by concrete mixer washout.
- Construction product staging, storage, waste and litter.
- Fertilizer and pesticide used for landscaping.
- Building materials such as paints and sealants leaked or spilled on site.
- TSS runoff loads from roadways.
- Surface water runoff form roadway pavement.
- Runoff for fuel or hazardous material spills.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0584

ATTACHMENT B – VOLUME AND CHARACTER OF STORMWATER

The total drainage area of the Toro Grande North project is 10.22 acres. The existing conditions consist of 3.56 acres of impervious cover with a runoff coefficient of of 0.59. With the construction of the proposed roadway, the developed condition consists of 5.63 acres of impervious cover and a runoff coefficient of 0.75. The project has been divided into two drainage areas: DA-4 and DA-5, which can be seen in the Existing and Developed Drainage Area Maps (Attachment G of the Temporary Stormwater Section TCEQ-0602)).

DA-4 consists of 5.47 acres, with 2.87 acres of impervious cover and a runoff coefficient of 0.69, generating 31.9 cfs of flow for the 100-year storm for existing conditions and 4.55 acres of impervious cover and a runoff coefficient of 0.89, generating 40.9 cfs of flow for developed conditions. This indicates that the volume of stormwater increases by 9.0 cfs for DA-4. This drainage area is further divided into two storm drain networks, STRM-D and STRM-E. STRM-D encompasses 2.76 acres and consists of 1.43 acres of existing and 2.53 acres of developed impervious cover. This storm drain network collects runoff from the southern portion of DA-4 and discharges into the existing roadside ditch along Whitestone Blvd. STRM-E encompasses 2.71 acres with 1.56 acres of existing and 2.14 acres of developed impervious cover. This storm drain network collects runoff from the northern portion of DA-4, overtreats the runoff for the entire project with an inline Contech Jellyfish, and discharges into the open field to the west of Toro Grande Blvd.

DA-5 consists of 4.74 acres, with 0.69 acres of impervious cover and a runoff coefficient of 0.47, generating 21.5 cfs of flow for the 100-year storm for existing conditions and 1.09 acres of impervious cover and a runoff coefficient of 0.51, generating 25.8 cfs of flow for developed conditions. This indicates that the volume of stormwater increases by 4.2 cfs for DA-5. Runoff from DA-5 is collected by the proposed storm drain network STRM-F, which discharges into the existing storm drain network on New Hope Drive.

Overall, there is an increase in flow of 13.2 cfs for this project for the 100-year storm. A hydrologic study of Brushy Creek determined that this increase of flow is negligible, and detention is not required. With the increase in asphalt and concrete pavement area, there is also an increase in the amount of hydrocarbons such as oil and grease, total suspended solids (TSS), and other pollutants. The Contech Jellyfish selected as a BMP meets the requirement of 80% TSS removal.

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

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Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Julie Hastings

Date: 2/20/2025

Signature of Customer/Agent:

Julie Hastings

Regulated Entity Name: Toro Grande Blvd (RM1431 to New Hope Dr)

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☐ The following fuels and/or hazardous substances will be stored on the site: _____

   These fuels and/or hazardous substances will be stored in:

   ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☒ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Brushy Creek

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. ☒ **Attachment D – Temporary Best Management Practices and Measures**. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☐ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

   ☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

   ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

    ☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

☒ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☒ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0602

ATTACHMENT A – SPILL RESPONSE ACTIONS

Measures that will be taken to contain any spill of hydrocarbons or hazardous substances will include:

1. Immediate isolation of the substance source to keep additional spill or possible infiltration from occurring. 2-3 cubic yards of clean sand shale shall be kept on site to assist in the isolation and containment of the spill material.

2. The substance and contaminated materials will be excavated and placed within an impervious container or impervious-lined area that is protected from STORM WATER runoff. Excavated materials will be covered to protect against rain.

3. The hazardous substance will be positively identified.

4. The spill area, after the excavation, will be sampled to verify that the hazardous substance has been properly and adequately remediated.

5. The excavated materials will be disposed of at an approved facility licensed to accept the substance identified. All transporting and disposal will follow State requirements for hazardous substances.

6. In the event of a reportable spill (as defined by the Texas Administrative Code Rule 327.4) TCEQ is to be notified immediately:

    - Environmental Release Hotline or the Texas Natural Resource Conservation Commission (TNRCC) 1-800-832-8224

To prevent the spills in the construction area the following guidelines will be followed as specified in the “Guidance for Sustainable Stormwater Drainage on the Texas Coast” 3rd Edition. More information can be found on the Texas General Land Office website https://cleancoast.texas.gov/

3.3 Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees. The following steps will help reduce the stormwater impacts of leaks and spills:

Education

1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

4) Establish a continuing education program to indoctrinate new employees.

5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

2) Store hazardous materials and wastes in covered containers and protect from vandalism.

3) Place a stockpile of spill cleanup materials where it will be readily accessible.

4) Train employees in spill prevention and cleanup.

5) Designate responsible individuals to oversee and enforce control measures.

6) Spills should be covered and protected from stormwater run-on during rainfall to the extent that it doesn't compromise clean up activities.

7) Do not bury or wash spills with water.

8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

11) Place Material Safety Data Sheets(MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and lines should be repaired or replace as needed to maintain proper function.

Cleanup

1) Clean up leaks and spills immediately.

2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

2) Use absorbent materials on small spills rather than hosing down or burying the spill.

3) Absorbent materials should be promptly removed and disposed of properly.

    - Follow the practice below for a minor spill.
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately;

1) Contain spread of the spill.

2) Notify the project foreman immediately.

3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

1) Notify the TCEQ by telephone as soon as possible and within 24 hours. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

3) Notification should first be made by telephone and followed up with a written report.

4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until appropriate and qualified staffs have arrived at the job site.

5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

Vehicle And Equipment Maintenance

1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately

3) Check incoming vehicles and equipment (including delivery trucks, as well as employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

5) Place drip pans or absorbent materials under paving equipment when not in use.

6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.

7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle And Equipment Fueling

1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

2) Discourage "topping off" of fuel tanks.

3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

More information on spill rules and appropriate responses is available on the TCEQ website at: https://www.tceq.texas.gov/response/spills/actions.html

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0602

ATTACHMENT B – POTENTIAL SOURCES OF CONTAMINATION

I. Potential sources of contamination associated with the construction phase of this project that could affect storm water quality are listed as follows:

- Runoff and erosion of sediment and pollutants from exposed soil due to site preparation, including grading, excavation, and clearing vegetation.
- Oil and Grease from runoff pollutants associated with paving.
- Construction sewage leaks from sanitary facilities including portable bathrooms and wastewater storage tanks for field office sanitary facilities.
- Gasoline, engine coolant, transmission fluid, etc. from leaks or spills associated with vehicle use on site.
- Sediment and high pH runoff caused by concrete mixer washout.
- Construction product staging, storage, waste and litter.
- Fertilizer and pesticide used for landscaping.
- Building materials such as paints and sealants leaked or spilled on site.
- TSS runoff loads from roadways.
- Surface water runoff form roadway pavement.
- Runoff for fuel or hazardous material spills.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0602

ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITIES

1. In order to prevent pollutants from entering the aquifer, silt fence and rock berms will be placed downgradient of any disturbance prior to any construction activities such as grading and clearing.
    - Silt fence and rock berms will not be removed until the completion of the construction and the site is fully vegetated

2. Inlet protection needs to be installed for the storm drain inlets along Toro Grande Blvd. The purpose of the inlet protection is to prevent existing pipe from clogging or losing a major portion of its capacity

3. Construction will then commence on the Toro Grande Blvd.

4. After the entire site is vegetatively re-established, all temporary BMP's will be removed.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ 0602

ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Onsite Stormwater:

Silt fences have been proposed directly downgradient of proposed construction activities where there is not concentrated flow. Where concentrated flow exits the proposed construction area, rock berms have been proposed. These measures will reduce the velocity of onsite and upgradient stormwater exiting the proposed construction area, which will reduce the amount of sediment picked up by the stormwater. Inlet protection is also proposed at the entrance of all existing and proposed inlets to prevent clogging due to onsite and upgradient stormwater.

The proposed downgradient silt fences and rock berms also serve to prevent suspended sediment from exiting the construction area and flowing into Brushy Creek. These measures prevent pollutants from entering surface streams, sensitive features, or the aquifer. There were no naturally occurring sensitive features identified in the Geologic Assessment. The only sensitive features identified in the Geologic Assessment are manmade structures and boreholes, which were all deemed sensitive for the sole purpose of bringing them to the attention of the engineer.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

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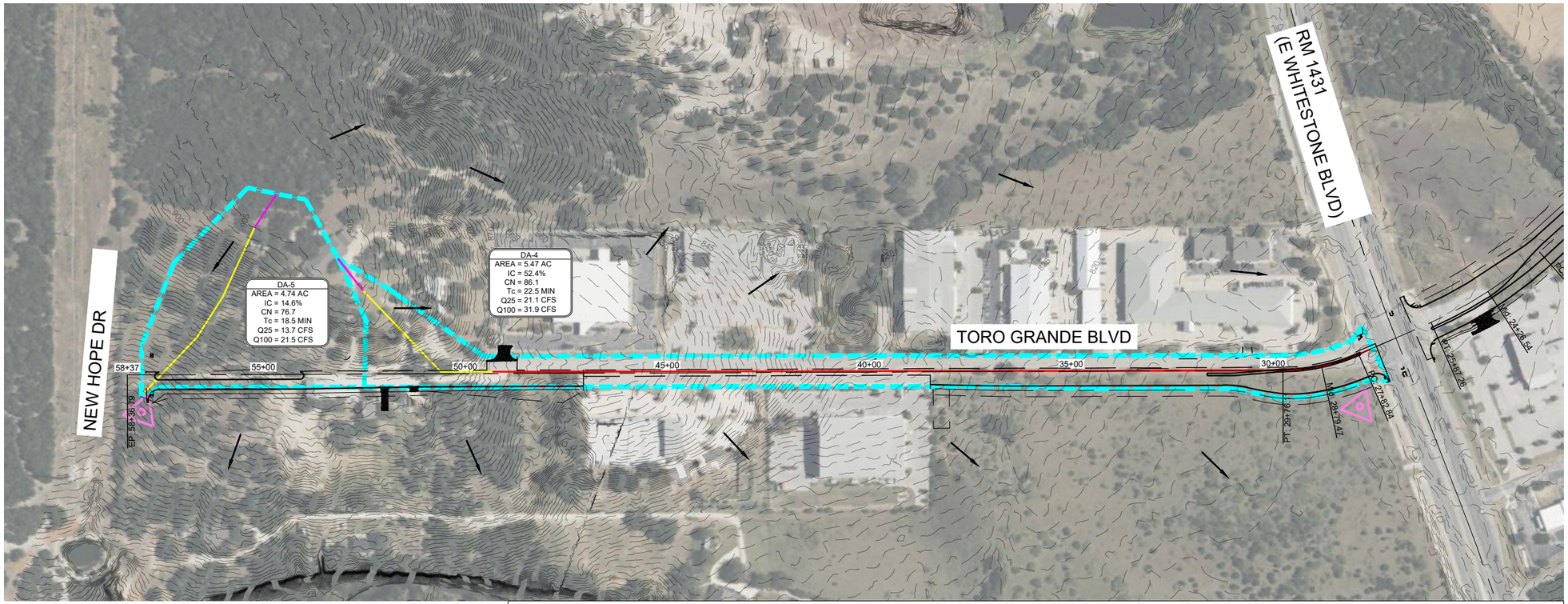
ATTACHMENT F – STRUCTURAL PRACTICES

The structural practices proposed that will limit runoff discharge of pollutants from exposed areas of the site will be the use of silt fences, rock berms, and inlet protection to prevent the excavated material from washing across the site.



EXISTING CONDITIONS											
DA	AREA (AC)	IMPERVIOUS COVER (AC)	IMPERVIOUS COVER (%)	TIME OF CONCENTRATION (MIN)	CN	C25	C100	I25 (IN/HR)	I100 (IN/HR)	Q25 (CFS)	Q100 (CFS)
4	5.47	2.87	52.4%	22.5	86.1	0.61	0.69	6.3	8.4	21.1	31.9
5	4.74	0.69	14.6%	18.5	76.7	0.42	0.49	6.9	9.3	13.7	21.5

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

ATTACHMENT G - DRAINAGE AREA MAPS (EXISTING)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

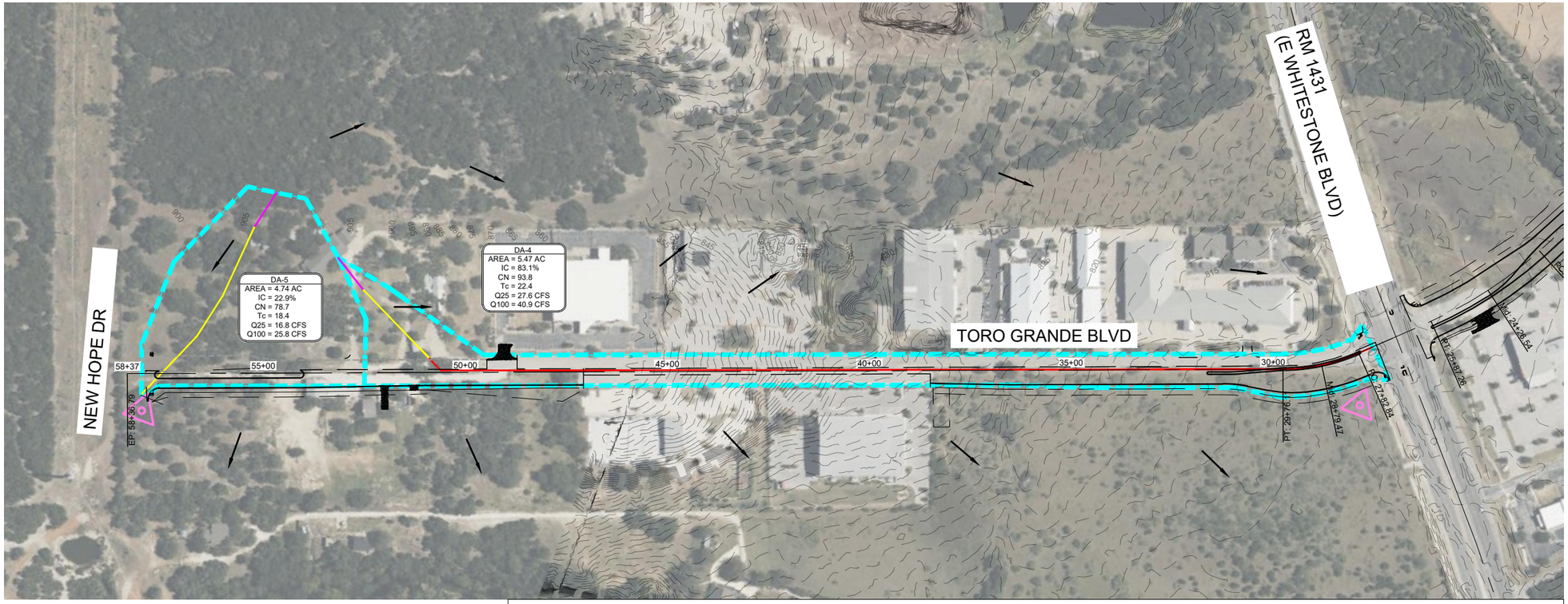
PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 10/7/2024

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: ALFONSO M. CASIO
P.E. Serial No.: 137323
Date: 10/7/2024

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
SD-101

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-DA-MAPS.dwg -- Tab: EXISTING DRAINAGE AREA MAP -- Plotted: 10/7/2024 5:26 PM By: BARRETT GUINN



DEVELOPED CONDITIONS											
DA	AREA (AC)	IMPERVIOUS COVER (AC)	IMPERVIOUS COVER (%)	TIME OF CONCENTRATION (MIN)	CN	C25	C100	I25 (IN/HR)	I100 (IN/HR)	Q25 (CFS)	Q100 (CFS)
4	5.47	4.55	83.1%	22.4	93.8	0.80	0.89	6.3	8.4	27.6	40.9
5	4.74	1.09	22.9%	18.4	78.7	0.51	0.58	7.0	9.3	16.8	25.8

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
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ATTACHMENT G - DRAINAGE AREA MAPS (DEVELOPED)

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 10/7/2024

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: ALFONSO M. CASIO
P.E. Serial No.: 137323
Date: 10/7/2024

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SHEET
SD-103

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-DA-MAPS.dwg – Tab: EXISTING DRAINAGE AREA MAP (2) – Plotted: 10/7/2024 5:26 PM By: BARRETT GUINN

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ 0602

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPs

The BMPs for the construction of this project will be use of silt fence, rock berm, and inlet protection. The following inspection and maintenance procedures will be implemented:

1. Silt fence, and rock berm must be in place prior to the start of construction and will remain in place until construction has been completed and the site stabilized from further erosion.

2. The contractor will inspect the rock berms, and silt fencing weekly and after each rain event. The contractor will promptly repair or replace any damaged TBMPs.

3. All soil, sand, gravel, and excavated material stockpiled on-site will have appropriately sized silt fencing placed upgradient and downgradient.

4. The contractor will keep a record of the weekly inspections, noting the condition of the rock berms, and silt fencing and any corrective action taken to maintain the erosion control structures. In addition to the inspection and maintenance reports, the operator should keep records of the construction activity on site. In particular, the following information should be kept:
    - The dates when major grading activities occur in a particular area.
    - The dates when construction activities cease in an area, temporarily or permanently.
    - The dates when an area is stabilized, temporarily or permanently.

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ 0602

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

The schedule of interim and permanent soil stabilization will be as follows:

1. Once construction of the project has commenced, the construction activity is planned to continue until the project is complete. The storm line trenches will be excavated and trenches loosely backfilled until all the trenches have been excavated. The trenches will then be re-excavated, and the storm lines and services will be installed. This work is intended to continue until all the lines are installed. Once the project is complete, the majority of the project site will be seeded with high quality U.S. Department of Agriculture certified seed (blue tag).

2. Prior to the construction, silt fence will be placed around the entire project site to protect the area from upgradient runoff. Rock berm will be placed downgradient of the proposed site in order to minimize the potential suspended solids caused by excavation. During excavation, scheduling can be a very effective means of reducing the hazard of erosion. Schedule construction activities to minimize the exposed area and the duration of exposure. In scheduling, the season and the weather forecast will be taken into account.

3. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of the site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable,

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Julie Hastings

Date: 2/20/2025

Signature of Customer/Agent

Julie Hastings

Regulated Entity Name: Toro Grande Blvd (RM1431 to New Hope Dr)

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☐ N/A

2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

☐ N/A

3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

   ☐ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☐ **Attachment B - BMPs for Upgradient Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

8. ☒ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☐ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)
☒ TCEQ construction notes
☒ All geologic features
☒ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☒ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☐ Signed by the owner or responsible party
    ☒ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☒ A discussion of record keeping procedures

    ☐ N/A

12. ☐ **Attachment H - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

13. ☒ **Attachment I -Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

    ☐ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☐ N/A

15. ☐ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☒ N/A

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0600

ATTACHMENT B – BMPS FOR UPGRADIENT STORMWATER

The portions of upgradient stormwater that drain into the project area are collected on the roadway and conveyed to curb inlets. All stormwater is then conveyed through storm drain networks and treated to meet the TSS removal requirements before discharging.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Toro Grande North
Date Prepared: 11/4/2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	10.22	acres
Predevelopment impervious area within the limits of the plan * =	3.56	acres
Total post-development impervious area within the limits of the plan* =	5.64	acres
Total post-development impervious cover fraction * =	0.55	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1810	lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 3

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = STRM-D

Total drainage basin/outfall area =	2.76	acres
Predevelopment impervious area within drainage basin/outfall area =	1.43	acres
Post-development impervious area within drainage basin/outfall area =	2.53	acres
Post-development impervious fraction within drainage basin/outfall area =	0.92	
$L_{M\ THIS\ BASIN}$ =	957	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	N/A	
Removal efficiency =	0	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	2.76	acres
A_I =	2.53	acres
A_P =	0.23	acres
L_R =	0	lbs

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Toro Grande North
Date Prepared: 11/4/2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	10.22	acres
Predevelopment impervious area within the limits of the plan * =	3.56	acres
Total post-development impervious area within the limits of the plan* =	5.64	acres
Total post-development impervious cover fraction * =	0.55	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1810	lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 3

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = STRM-E

Total drainage basin/outfall area =	2.71	acres
Predevelopment impervious area within drainage basin/outfall area =	1.44	acres
Post-development impervious area within drainage basin/outfall area =	2.02	acres
Post-development impervious fraction within drainage basin/outfall area =	0.75	
$L_{M\ THIS\ BASIN}$ =	505	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Jellyfish	
Removal efficiency =	86	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	2.71	acres
A_I =	2.02	acres
A_P =	0.69	acres
L_R =	1934	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 505 lbs.

F = 0.26

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages Section 3.2.22

Offsite area draining to BMP =	1.03	acres
Offsite impervious cover draining to BMP =	0.00	acres

Rainfall Intensity =	1.10	inches per hour
Effective Area =	2.25	acres
Cartridge Length =	54.00	inches
Peak Treatment Flow Required =	**2.50**	cubic feet per second

7. Jellyfish Designed as Required in RG-348 Section 3.2.22

Flow Through Jellyfish Size	**Vault**	
Jellyfish Size for Flow-Based Configuration =	**JFPD0808-13-3**	
Jellyfish Treatment Flow Rate =	**2.58**	cfs

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Toro Grande North
Date Prepared: 11/4/2024

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Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:

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A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	10.22	acres
Predevelopment impervious area within the limits of the plan * =	3.56	acres
Total post-development impervious area within the limits of the plan* =	5.64	acres
Total post-development impervious cover fraction * =	0.55	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1810	lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 3

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = STRM-F

Total drainage basin/outfall area =	4.74	acres
Predevelopment impervious area within drainage basin/outfall area =	0.69	acres
Post-development impervious area within drainage basin/outfall area =	1.09	acres
Post-development impervious fraction within drainage basin/outfall area =	0.23	
$L_{M\ THIS\ BASIN}$ =	348	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	N/A	
Removal efficiency =	0	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	4.74	acres
A_I =	1.09	acres
A_P =	3.65	acres
L_R =	0	lbs

Larissa Prince 2/27/2025

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0600

ATTACHMENT G – INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

The Contech Jellyfish's installation follows standard vault installation processes. The Jellyfish Filter captures and removes pollutants from stormwater runoff, and these pollutants must be removed regularly to maintain treatment performance. Inspection activities for the Jellyfish unit include the observation of standing water, damage to the deck or cartridge lids, and the amount of debris in the inlet bay. Maintenance activities include the removal of oil, floatables, and sediment and rinsing or replacing the cartridges as needed. Inspection timing depends on the site's pollutant loading characteristics. During the first year following installation, quarterly inspections are recommended to ensure proper functioning of the system and to assess pollutant accumulation to develop a plan for future inspection and maintenance. Subsequent inspections are recommended at least once per year and after major storm events and is required after any upgradient oil, fuel, or chemical spills. Maintenance requirements are based on inspection results, maintenance history, or the maintenance plan. Typical maintenance procedures include sediment removal for depths reaching 12 inches or at three-year intervals, floatable, debris, and oil removal, deck cleaning, and rinsing or replacing filter cartridges. Detailed maintenance procedures are outlined in the Jellyfish Owner's Manual.

Responsible Party for Maintenance: City Cedar Park

450 Cypress Creek Road

Cedar Park, Texas 78613

Signature of Responsible Party: _____

EDWARDS AQUIFER PROTECTION PROGRAM WPAP APPLICATION

TCEQ - 0600

ATTACHMENT I – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Based on the increase in impervious cover for this project of 2.07 acres, there is an increase in flow of 13.2 cfs for this project for the 100-year storm event. A hydrologic study of Brushy Creek determined that this increase of flow is negligible, and detention is not required.

During construction, temporary BMPs outlines in the Storm Water Pollution Prevention Plan (SW3P), located in the construction plans, will be utilized to treat any on-site runoff prior to entering any surface streams. From an environmental point of view, silt fences, rock berms, seeding, and inlet protection are selected to minimize sediment in effluent stormwater. After construction, a Contech Jellyfish Filter was selected as a BMP to meet the requirement of 80% Total Suspended Solids (TSS) removal.

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Randall Lueders,
Print Name

Director of Engineering and Capital Projects,
Title - Owner/President/Other

of City of Cedar Park,
Corporation/Partnership/Entity Name

have authorized Julie Hastings
Print Name of Agent/Engineer

of Cobb, Fendley & Associate, Inc.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Randy Ueders
Applicant's Signature

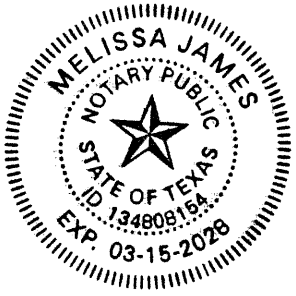
2-21-25
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Randall Ueders known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 21st day of February, 2025.



Melissa James
NOTARY PUBLIC

Melissa James
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 3-15-2028

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Toro Grande Blvd (RM1431 to New Hope Dr)
Regulated Entity Location: Cedar Park, Texas
Name of Customer: City of Cedar Park
Contact Person: Randall Lueders Phone: 512-401-5000
Customer Reference Number (if issued):CN 600407951
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	6.11 Acres	$ 5,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Julie Hastings Date: 2/20/2025

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 600407951		**RN**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	07/08/2004

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
The City of Cedar Park	

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*

11. Type of Customer:	☐ Corporation	☐ Individual	Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other		☐ Sole Proprietorship	☐ Other:

12. Number of Employees	**13. Independently Owned and Operated?**
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher	☐ **Yes** ☒ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	City of Cedar Park, Texas						
	450 Cypress Creek Road						
	City	Cedar Park	**State**	TX	**ZIP**	78613	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	randall.lueders@cedarparktexas.gov

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(512) 401-5000		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Toro Grande Blvd from RM1431 to New Hope Dr

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	Toro Grande Blvd							
	City	Cedar Park	**State**	TX	**ZIP**	78613	**ZIP + 4**	
24. County								

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.543099		**28. Longitude (W) In Decimal:**	-97.777260	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30°	32'	35.1564"	97°	46'	38.1354"

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
1611		237310	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Roadway

34. Mailing Address:								
	City		**State**		**ZIP**		**ZIP + 4**	
35. E-Mail Address:								

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
( ) -		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Julie Hastings	41. Title:	Project Manager

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512 - 834-9798		( ) -	jhastings@cobbfendley.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	CobbFendley	Job Title:	Project Manager	
Name *(In Print)*:	Julie Hastings		Phone:	(512 - 834-9798
Signature:	Julie Hastings		Date:	2/20/2025

CEDAR PARK

TORO GRANDE BOULEVARD
ROADWAY IMPROVEMENTS - NORTH

PROJECT LIMITS: TORO GRANDE BOULEVARD BETWEEN NEW HOPE AND RM 1431
PROJECT DESCRIPTION: 3102 LF OF ROADWAY RECONSTRUCTION WITH SIDEWALKS AND SHARED USE PATHS, SIGNING AND PAVEMENT MARKINGS, STORM DRAINS, WATER AND WASTEWATER LINES, TRAFFIC SIGNALS, AND CONTINUOUS ILLUMINATION

TCEQ SUBMITTAL

OWNER:
CITY OF CEDAR PARK ENGINEERING
450 CYPRESS CREEK RD, BLDG. 1
CEDAR PARK TX, 78613

CONTACT:
CHRIS BRICKEY, P.E.
512-401-5351

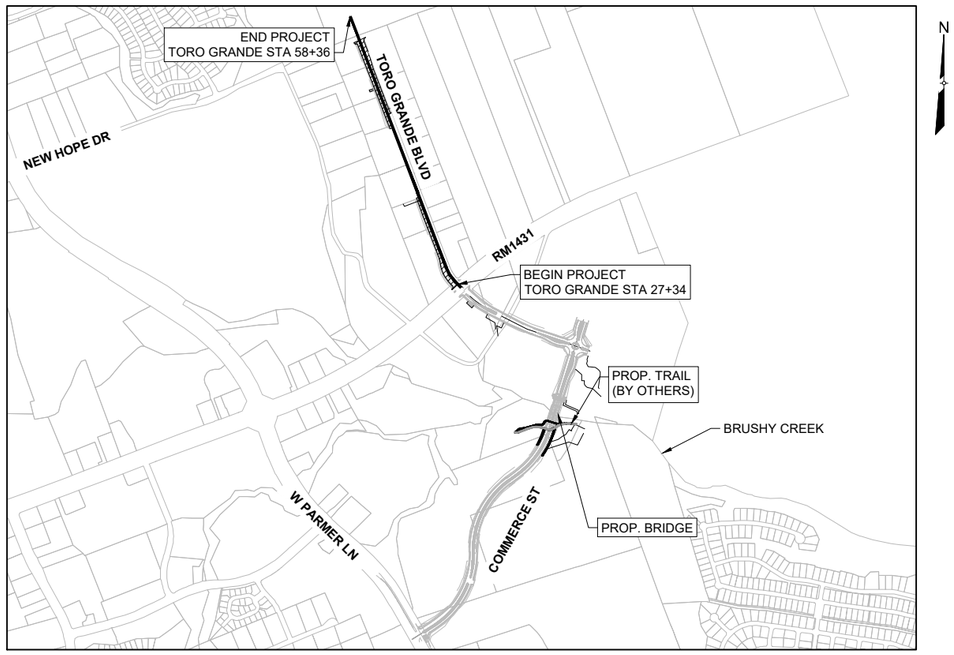
DESIGNER:
COBB, FENDLEY & ASSOCIATES, INC.
9600 N. MOPAC EXPRESSWAY, STE. 800
AUSTIN, TEXAS 78759

CONTACT:
JULIE D. HASTINGS
512-646-4309

SUBMITTED FOR APPROVAL:

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER

2/27/2025
JULIE D. HASTINGS — DATE
ENGINEER OF RECORD



VICINITY MAP
(NOT TO SCALE)

DESIGN SPEED = 45 MPH
35 MPH THROUGH 1431 INTERSECTION

APPROVALS:

FOR CITY OF CEDAR PARK — DATE

REV. NO.	REVISION DESCRIPTION	(C)ORRECT, (A)DD, (V)OID SHEET NUMBERS	APPR'D BY:	DATE

GENERAL PERMIT PROGRAM

INDEX OF SHEETS

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046705
9000 N. MOPAC EXPRESSWAY, SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

INDEX OF SHEETS

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
G-002

Capital Improvement Project General Construction Notes

Capital Improvement Project General Construction Notes
Revised October 11, 2022

General Notes:

1. General Contractor shall call for all utility locates prior to any construction. Contractor shall delineate areas of excavation using white paint (white lining) in accordance with 16 TAC 18.3. Water & wastewater owned by the City of Cedar Park can be located by calling Texas 811 at 1-800-344-8377. Allow three business days for utility locates by the City of Cedar Park.
2. All construction shall be in accordance with the latest City of Austin Standard Specifications. City of Austin standards shall be used unless otherwise noted.
3. Prior to City acceptance of all improvements, all graded and disturbed areas inside the right of way between the property line and edge of pavement / back of curb shall be revegetated according to COA specification 602S and 606S; all graded and disturbed areas outside of the right of way shall be re-vegetated in accordance with the City of Austin Specification Item #604 native mix unless another re-vegetation specification is specifically identified in the plans and/or bid form.
4. The Contractor shall provide the City of Cedar Park copies of all test results prior to acceptance of this project.
5. City, owner, engineer, contractor, representatives of all utility companies, and a representative from the testing lab shall attend pre-construction conference prior to start of construction. The contractor shall schedule the meeting with the City of Cedar Park Engineering Department 48 hours prior to this pre-construction meeting (512-401-5000).
6. Excess soil shall be removed at the contractor's expense. Notify the City of Cedar Park for approval if the disposal site is inside the City's jurisdictional boundaries.
7. Burning is prohibited.
8. No blasting is allowed on this project.
9. Any changes or revisions to these plans must first be submitted to the City by the design engineer for review and written approval. All changes and revisions made to the design of utilities or impacts utilities shall use revision clouds to highlight all revisions or changes with each submittal. Revision triangles shall be used to mark revisions. All clouds and triangle markers from previous revisions may be removed. Revision information shall be updated in the appropriate areas of the Title Block.
10. The Contractor will reimburse the City for all cost incurred as a result of any damage to any City utility by the Contractor, regardless of these plans.
11. An engineer's concurrence letter and electronic 22"x34" record drawings shall be submitted to the Engineering Department prior to the issuance of final acceptance. The Engineer and Contractor shall verify that all final revisions and changes have been made to record drawings prior to City submittal. Record construction drawings, including roadway and all utilities, shall be provided to the City in AutoCad ". dwg" files and ".PDF" format on a CD, DVD, or USB Flash Drive. Line weights, line types and text size shall be such that if half-size prints (11"x 17") were produced, the plans would still be legible. All required digital files shall contain a minimum of two (2) control points referenced to the State Plane Grid Coordinate System – Texas Central Zone (4203), in US feet and shall include rotation information and scale factor required to reduce surface coordinates to grid coordinates in US feet.
12. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
13. A traffic control plan sign and sealed by a Licensed Texas Professional Engineer, in accordance with the Texas Manual on Uniform Traffic Control Devices, shall be submitted to the City for review and approval prior to any partial or complete roadway closures.
14. The contractor shall keep the site clean and maintained at all times, to the satisfaction of the City. This project will not be accepted until the site has been cleaned and re-vegetated to the satisfaction of the City.
15. Signs are not permitted in Public Utility Easements, Set Backs or Drainage Easements.
16. Inspect temporary erosion controls on a daily basis. Adjust the controls and/or remove any sediment buildup as necessary.
17. Contractor will be responsible for keeping roads and drives adjacent to and near the site free from soil, sediment and debris. Contractor will not remove soil, sediment or debris from any area or vehicle by means of water, only shoveling and sweeping will be allowed. Contractor will be responsible for dust control from the site.
18. The Contractor shall be responsible for all damage to private property, which occurred as a result of any portion of this project. Any damage to private property shall be repaired to equal or better condition. The Contractor shall coordinate all repairs to private property with the property owner. Contractor shall pay and/or settle with private property owner for all costs related to any damage. The City will not provide separate pay for repair of any damages, reimbursements or settlements.
19. Contractor shall provide the services of the City's approved SCADA consultant and controls instrumentation consultant. (When applicable to SCADA) The cost of the consultant and/or any equipment shall be subsidiary to the cost of the project (no separate pay) unless specifically identified on the bid form.
20. The contractor shall make applications to Pedernales Electric Cooperative for electric service if new service is required. The City will assume the service upon acceptance of the project (if required). The contractor will pay for electric power until the meter is transferred to the City of Cedar Park. Impact fees and Application Fees required by PEC will be the responsibility of the Contractor unless specifically identified in the contract.
21. The contractor shall provide combination locks for all gates, hatches, vaults, and MCC boxes. Each lock shall be pre-approved and set to the City's requirements. (No separate pay)
22. All work on these plans shall be performed. Pay for work shown on these plans, which are not identified in the contract, shall be considered incidental to the items specifically identified for payment.
23. The contractor shall provide a competent and qualified superintendent to supervise all work. The superintendent shall be present during all construction activities.
24. Any survey monuments damaged or moved as a result of this project shall be replaced to equal or better condition. A Texas Registered Professional Land Surveyor shall oversee the replacement and certify the replacement for its intended use. No separate pay will be provided.
25. Adequate drainage conditions, in accordance with the City of Austin Drainage Criteria Manual, shall be maintained at all times.
26. Any tree removed or damaged by this project, which is not specifically identified to be removed by the plans, will be replaced according to the requirements of the City of Cedar Park Code of Ordinances. No separate pay will be provided.
27. The contractor shall uncover all utilities within the limits of construction and verify their horizontal and vertical location prior to any construction activities. The contractor shall notify

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274 | LAND SURVEYING FIRM NO. 10046705
9000 N. MOPAC EXPRESSWAY | SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

GENERAL NOTES
(SHEET 1 OF 5)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SHEET
G-003

the City and the Engineer, IN WRITING, of any conflicts prior to any other construction including but not limited to exact locations of conflicts with proposed or existing utilities. No additional pay unless specifically identified for payment in the contract documents. The contractor shall also make his own sub-surface investigation prior to bid.

28. Only stainless steel casing spacers are allowed in encasement pipe(s).
29. No separate pay will be given to de-water trenches or other excavated areas.
30. Soil material, of sufficient organic content, imported for re-vegetation of disturbed areas shall be approved by the Engineering Department prior to placement. A sample (submittal) is required. Sandy-loam and/or soils with high clay content will not be accepted.
31. The contractor shall perform pumping stations and/or lift station start-up independently: prior to requesting witness or acceptance by the City. When a final start-up fails to be complete and acceptable and when City personnel are present at start-up, each additional start-up will be charged to the contractor, as liquidated damages, $500.00 per additional meeting.
32. Shutout of any customers of the City's utility due to tie-ins shall only be scheduled for nighttime work unless approved by the Public Works Department. The City's field representative shall coordinate and inspect all nighttime shutouts and tie-ins. The contractor shall request shutouts two weeks in advance. Shutouts will only be allowed in the following times and are subject to approval by the City: 10 PM - 6 AM; beginning on Tuesday, Wednesday or Thursday night(s). No extra time will be granted to the contract for unscheduled work in the time period allowed or due to requests outside the approved time periods.
33. All construction and construction related activities shall be performed Monday thru Friday from 7:00 A.M. to 6:00 P.M. However, construction activities within five hundred feet (500') of a dwelling or dwelling unit shall be performed between the hours of 8:00 a.m. and 6:00 p.m. Otherwise all construction and construction related activities shall conform to City of Cedar Park Code of Ordinances, specifically ARTICLE 8.08.
34. Approval for construction activities performed on Owner's Holidays, and/or Saturdays, outside of Monday through Friday 8 am to 5 pm, or in excess of 8 hours per day shall be obtained in writing 48 hours in advance, and inspection fees at 1.5 times the hourly inspection rate shall be billed directly to the contractor. There shall be no construction or construction related activities performed on Sunday. The City reserves the right to require the contractor to uncover all work performed without City inspection.
35. Temporary rock crushing operations are not allowed. All sources for flexible base material are required to be approved by the City. Prior to base placement all current triaxial test reports for the proposed stockpiles are to be submitted to the City's project representative for review and approval.
36. There shall be no water or wastewater appurtenances, including but not limited to, valves, fittings, meters, clean-outs, manholes, or vaults in any driveway, sidewalk, traffic or pedestrian area.
37. Sidewalks shall not use curb inlets as a partial walking surface. Sidewalks shall not use traffic control boxes, meter or check valve vaults, communication vaults, or other buried or partially buried infrastructure as a vehicular or pedestrian surface.

Street Notes:

1. No trenching of compacted base will be allowed. A penalty and/or fine may be imposed to the general contractor if trenching of compacted base occurs without City approval, regardless of who performed the trenching.
2. All sidewalks shall comply with the Americans With Disabilities Act and the Texas Architectural Barriers Act. The City of Cedar Park has NOT reviewed these plans for compliance with the Americans With Disabilities Act, Texas Architectural Barriers Act, or any other accessibility legislation, and does not warranty or approve these plans for any accessibility standards. However, prior to project acceptance, the Contractor shall submit to the COCP documentation that the project was inspected by the Texas Department of Licensing and Regulation or a Registered Accessibility Specialist and the project is in compliance with the requirements of the Texas Architectural Barriers Act.
3. Street barricades shall be installed on all dead end streets and as necessary during construction to maintain job safety.
4. Any damage caused to existing pavement, curbs, sidewalks, ramps, etc., shall be repaired by the contractor to the satisfaction of the City prior to acceptance of this project.
5. Density testing of compacted subgrade material, first course and second course compacted base, shall be made at 500 foot intervals. Any failed tests will be re-tested at the expense of the contractor.
6. The contractor shall coordinate with the City's field representative 48 hours prior to scheduled density testing. The City's field representative shall witness all testing.
7. The City will notify the contractor of the name, contact and phone number of the testing laboratory for this job. The City will pay for all tests that pass the specifications the first time. The CONTRACTOR shall schedule the testing with the laboratory and notify the City's field representative of the time and location of all tests.
8. Traffic control signs and pavement markings in accordance with the Texas Manual on Uniform Traffic Control Devices to be installed as directed by the City of Cedar Park prior to City acceptance of this project.
9. Slope of natural ground adjacent to the right-of-way shall not exceed 3:1. If a 3:1 slope is not possible, a retaining wall or some other form of slope protection approved by the City shall be placed in a location acceptable to the City.
10. The City, engineer, contractor, and a representative from the asphalt-testing lab shall attend a pre-paving conference prior to the start of HMAC paving. The contractor shall give the City's field representative 48 hours notice prior to this meeting.
11. Re-testing of the asphalt pavement shall be limited to one retest per project. Failed tests shall be the financial responsibility of the contractor.
12. All pavement markings and signage shall comply with MUTCD standards.
13. Pavement markings shall be thermoplastic unless otherwise noted.
14. Street name signs shall be provided and installed in accordance with Street Name Sign Pole detail provided by the City of Cedar Park.
15. All street name signs shall be high intensity retro grade.
16. A minimum of seven days of cure time is required for HMAC prior to the introduction of vehicular traffic to any streets.
17. No Fencing or Wall is allowed to be constructed so that it obstructs the sight lines of drivers from an intersecting public roadway or from an intersecting private driveway. Sight lines are to be maintained as described in City Code Section 14.05.007. Installing a fence or wall which does not comply with the City's Sight Distance Requirements or Fencing Regulations is a violation of the City's Ordinance and may be punishable pursuant to Section 1.01.009 of City Code.
18. Utility service boxes or other utility facilities shall not be installed within areas determined to be required sight lines of two intersecting public streets or within sight lines of a private driveway. Sight lines are to be maintained compliant with Table 1-1 of the Austin Transportation Criteria Manual. Utilities determined by the Director of Engineering to be placed within required sight lines may be required to be relocated at the expense of the contractor prior to the City issuing a Certificate of Occupancy or prior to the City's Acceptance of the Project Improvements.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

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9000 N. MOPAC EXPRESSWAY, SUITE 800
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GENERAL NOTES
(SHEET 2 OF 5)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

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STATE OF TEXAS
JULIE D. HASTINGS
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LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SHEET
G-004

19. All lane closures shall occur only between the hours of 9 AM and 4 PM. Any night time lane closures require approval by the Director of Engineering and shall occur between the hours of 8 PM and 6 AM. Lane closures observed by City during the peak hours of 6 AM to 9 AM, or 4 PM to 8 PM will be subject to fine per Chapter 1 of City Ordinance, and/or subsequent issuance of Work Stoppage.
20. Improvements that include reconstruction of an existing Type II driveway shall be done in a manner which retains operations of not less than half of the driveway at all times. Full closure of such driveway can be considered with written authorization retained by the Contractor from the property owner(s) or access easement right holder(s) of the driveway allowing full closure of the driveway.
21. Trees must not overhang within 10’ vertically of a sidewalk, or 18’ vertically of a roadway or driveway.

Wastewater Notes:

1. Refer to the City of Cedar Park Public Works Utility Policy and Specifications manual.
2. The contractor, with City approval, shall raise manhole frames and covers and water valve boxes to finished pavement grade at the contractor's expense. All utility adjustments shall be completed prior to final paving construction.
3. The location of any existing utility lines shown on these plans may not be accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor. The contractor shall make his own sub-surface investigation prior to bid. The contractor shall uncover all utilities within the limits of construction and verify their horizontal and vertical location prior to any construction activities.
4. All iron pipe and fittings shall be wrapped with at least 8-mil polyethylene wrap, according to the COA Specification. All metallic pipe shall be cathodically protected.
5. All water mains, wastewater mains and service lines shall meet City of Austin minimum cover specifications. All streets are to be cut to subgrade prior to installation of water mains.
6. Where 48-inches of cover below subgrade cannot be achieved for wastewater service lines alternate materials shall be used. A minimum of 36-inches of cover below subgrade shall be achieved. Any wastewater service line with cover between 36-inch and 48-inches shall be SDR-26 PVC pressure pipe.
7. Gasketed PVC sewer main fittings shall be used to connect SDR-35 PVC to SDR-26 PVC pressure pipe or C-900.
8. SDR-35 WW is not allowed.
9. Forcemains shall be epoxy lined ductile iron.
10. All sanitary sewers, excluding service lines, shall be mandrel tested per TCEQ (Texas Commission on Environmental Quality) criteria. A mandrel test will not be performed until backfill has been in place for a minimum of 30 days.
11. All sanitary sewers, including service lines, shall be air tested per City of Austin Standard Specifications.
12. Density testing of compacted backfill shall be made at a rate of one test per two foot lifts per 500 feet of installed pipe, unless specified otherwise by the City.
13. City to be given 48 hours notice prior to all testing of water and wastewater lines. City inspection is required for all testing of water and wastewater lines.
14. Where a water or wastewater line crosses above (or below) a storm sewer structure and the bottom (or top) of the pipe is within 18 inches of the top (or bottom) of the utility structure, the pipe shall be encased with concrete for a distance of at least 1 ft. on either side of the ditch line of the utility structure or the storm sewer. Concrete encasement will not be required for ductile iron (thickness Class 50), AWWA C-900 (SDR-14) 200 psi rated PVC in sizes to 12 inches or AWWA C-905 (SDR-25) 165 psi rated PVC in sizes larger than 12 inches. Concrete encasement shall conform to C.O.A. standard detail 505-1.
15. The allowable (maximum) adjustment for a manhole shall be 12" (inches) or less.
16. Where a sewer line crosses a water line, the sewer line shall be one 20 ft. joint of 150 psi (or greater if specified in the plans) rated PVC centered on crossing.
17. All manhole and inlet covers shall read "City of Cedar Park".
18. All manhole lids outside the pavement shall be bolted. Security bolts per City specifications shall be used.
19. Contractor to notify City of Cedar Park 48 hours prior to connecting to existing utilities. Inspection of connections to existing utilities is required.
20. All pipe bedding material shall conform to City of Austin Standard Specifications.
21. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.
22. All wastewater manholes to be coated with organic materials and procedures listed in City of Austin Qualified Products List No. WW-511 (WW-511A and WW-511B are not allowed unless manhole is being structurally rehabilitated with approval by Public Works). All manholes will be pre-coated or coated AFTER testing.
23. Polybrid Coatings on wastewater manholes will not be allowed without pre-approval from the project manager. Any other manhole coating product appearing on the CoA SPL WW-511 is acceptable and required.
24. All manholes will be vacuum tested only.
25. Tracer tape shall be installed on all water and wastewater mains in accordance with City of Austin Standards regardless of the type of pipe or depth of pipe.
26. Piping in and around lift station valve vaults will be painted and/or coated to the City's specifications.
27. MCC's, junction boxes or any housing for electrical components shall be NEMA 4X stainless steel. Painted metal or any other type of box will not be accepted unless specifically identified in the plans.
28. All wastewater lines 10" and larger shall be video inspected in accordance with City of Cedar Park Public Works Department Utility Policy and Standard Specifications Manual Appendix E: Requirements for Video Inspection of Wastewater Lines at the Contractor’s expense. No separate pay unless noted on the bid form.
29. Calcutta MH rings are not allowed in the TX DOT ROW.
30. All pressure pipe shall have mechanical restraint and concrete thrust blocking at all valves, bends, tees, plugs, and other fittings.

Water Notes:

1. Refer to the City of Cedar Park Public Works Utility Policy and Specifications manual.
2. The top of valve stems shall be at least 18", and no more than 36", below finished grade. Valve stem risers shall be welded on each end to the City's satisfaction.
3. Fire hydrant leads to be ductile iron, Class 350, and installed per City of Austin standard specifications and City of Cedar Park detail.
4. The contractor shall provide cuts for all water lines and fire hydrant bury lines in accordance with the contract.
5. Approved 5 ¼” fire hydrants:
    - American Flow Control, B84B
    - Mueller Company, Super Centurion 250

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CobbFendley

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GENERAL NOTES
(SHEET 3 OF 5)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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- Clow Medallion Hydrant
- American AVK Company, Series 27 (Model 2780)
- All fire hydrants must meet City of Cedar Park thread specifications (National Thread)
- Blue reflector markers shall be located on the centerline of the pavement across from all fire hydrants. Pavement markers at intersections shall be four-sided.

6. Should a Tapping Saddle be approved by Public Works, the saddle shall be Smith-Blair 662 Stainless Steel Tapping Sleeves with all stainless hardware, or approved equal. Requests for alternate providers shall be made to the City of Cedar Park Public Works. No tap exceeding 2" in diameter will be approved.
7. All water lines, including service lines, shall be pressure and leak tested per City of Austin Standard Specifications and witnessed by the City of Cedar Park representative. All failed tests shall be the fiscal responsibility of the contractor, and the contractor may be required to re-test lines if the testing is not witnessed by the City. Contractor must notify the City of Cedar Park 48 hours prior to any testing.
8. All water lines shall be sterilized and bacteriologically tested in accordance with City of Austin Standards. The contractor is responsible for sterilization and the City of Cedar Park is responsible for submitting bacteriological samples to the State unless otherwise approved by the Public Works department. Public Works will require a contractor specialized in disinfection for large diameter lines or critical infrastructure, subsidiary to pipe installation.
9. All water valve risers not in pavement shall be set in concrete in accordance with the City's specifications and details. The standard detail is available on the City's web site.
10. Density testing of compacted backfill shall be made at a rate of one test per two foot lifts per 500 feet of installed pipe unless otherwise approved by the Engineering Department.
11. Contractor to obtain a water meter from the City of Cedar Park for any water that may be required during construction. (512-401-5000)
12. All water meter boxes shall be Ford Gulf Meter Box with locking lid.
    - SINGLE G-148-233
    - DUAL DG-148-243
    - 1" METER YL111 - 444
    - 1 ½" – 2" METER 1730-R (LID) & 1730-12 (BOX)/ACCEPTABLE BOXES FOR THIS SIZE OF METER
13. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade at the contractor's expense with City inspection. All utility adjustments shall be completed prior to final paving construction.
14. The location of any existing utility lines shown on these plans is the best available and may not be totally accurate. Any damage to existing utility lines, both known and unknown shall be repaired at the expense of the contractor. The Engineer and/or the City make no guarantee or warranty to the accuracy of these plans. The contractor shall make his own sub-surface investigation prior to bid. The contractor shall uncover all utilities within the limits of construction and verify their horizontal and vertical location prior to any construction activities.
15. All iron pipe and fittings shall be wrapped with at least 8-mil polyethylene wrap in accordance with the COA specification. All metallic pipe shall be cathodically protected.
16. All water mains, wastewater mains and service lines shall meet City of Austin Specifications for minimum cover requirements. All streets are to be cut to subgrade prior to installation of water mains.
17. City to be given 48 hours notice prior to all testing of water and wastewater lines. City inspection is required for all testing of water and wastewater lines.
18. Where a water or wastewater line crosses above (or below) a storm sewer structure and the bottom (or top) of the pipe is within 18 inches of the top (or bottom) of the utility structure, the pipe shall be encased with concrete for a distance of at least 1 ft. on either side of the ditch line of the utility structure or the storm sewer. Concrete encasement may not be required for ductile iron (thickness Class 50), AWWA C-900 (SDR-14) 200 psi rated PVC in sizes to 12 inches or AWWA C-905 (SDR-25) 165 psi rated PVC in sizes larger than 12 inches. Concrete encasement shall conform to C.O.A. standard detail 505-1. This note does not allow for pipe that would otherwise have a higher maximum operating pressure.
19. Contractor to notify City of Cedar Park 48 hours prior to connecting to existing utilities. Inspection is required.
20. All pipe bedding material shall conform to City of Austin Standard Specifications.
21. Tracer tape shall be installed on all water and wastewater mains regardless of the type of pipe or depth of pipe installed.
22. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.
23. The City considers protection of its water system paramount to construction activities. City personnel will operate, or authorize the contractor to operate, all water valves that will pass through the City's potable water. The contractor may not operate any water valve, existing or proposed, that will allow water from the City's water system to flow to a proposed or existing water system without the express consent of the City. Notify the City two business days in advance of any request to operate a water valve. The general contractor may be fined $500 or more, including additional theft of water fines, if a water valve is operated in an unauthorized manner, regardless of who operated the valve.
24. All water valves over 24" in size shall have a by-pass line and valve installed. By-pass valves and lines are subsidiary to the cost of the valve unless specifically identified on the bid form.
25. All water pipe and appurtenances larger than 12" shall have a maximum operating pressure greater than 250 psi unless specifically identified on the bid form.
26. A.Y. McDonald "T" series compression fittings will not be accepted by the City of Cedar Park. Mac-Pak compression fittings, or another type listed on the COA SPL is acceptable.
27. All potable water system components installed after January 4, 2014, shall be "lead free" according to the United States Safe Drinking Water Act. The only components exempt from this requirement are fire hydrants. Components that are not clearly identified by the manufacturer as meeting this requirement by marking, or on the product packaging, or by pre-approved submittal, will be rejected for use. A NSF certification will be adequate if the certification has not expired as of January 4, 2014 and remains unexpired at the time of construction.
28. All pressure pipe shall have mechanical restraint and concrete thrust blocking at all valves, bends, tees, plugs, and other fittings.

Storm Sewer Notes:

1. The contractor with City inspection shall raise manhole frames and covers and water valve boxes to finished pavement grade at the contractor's expense. All utility adjustments shall be completed prior to final paving construction. The contractor shall backfill around manholes and junction boxes with Class A concrete. All utility adjustments shall be completed prior to final paving construction.
2. All manhole lids shall be 32" or larger, unless expressly approved in writing by the Public Works Department. All lids outside the pavement will be bolted.

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GENERAL NOTES
(SHEET 4 OF 5)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SHEET
G-006

3. The location of any existing utility lines shown on these plans is the best available and may not be totally accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor.
4. Corrugated Metal Pipe is not permitted.
5. All manhole and inlet covers shall read "City of Cedar Park ".
6. Contractor to notify City of Cedar Park 48 hours prior to connecting to existing utilities.
7. All pipe bedding material shall conform to City of Austin Standard Specifications.
8. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.
9. Contractor to install and maintain geo-textile fabric barrier (inlet protection) around storm sewer leads and inlets to prevent silt and other material from entering the storm sewer collection system.
10. All curb inlets shall have an Almetek 4" Disc "No Dumping Drains to Waterway" marker.

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GENERAL NOTES
(SHEET 5 OF 5)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
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2/27/2025

SHEET
G-007

NOTES:

1. THE CRITICAL WATER QUALITY ZONE, EROSION HAZARD ZONE, AND WALNUT CREEK CENTERLINE SHOWN WERE TAKEN FROM AVAILABLE CITY OF AUSTIN GIS DATA THROUGH THE PROPERTY PROFILE. A SURVEY OF THESE FEATURES HAS NOT BEEN PERFORMED AS PART OF THIS PROJECT.
2. A PORTION OF THIS SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN, PER CITY OF AUSTIN AND FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS (FEMA FIRM NO. 48453C0470K)
3. SEE TORO GRANDE SOUTH SHEET SET FOR ROADWAY SOUTH OF RM 1431 42+00.00 TO STA. 10+00.00 FROM MARCH 1 THROUGH AUGUST 1 OF ANY YEAR.
4. TEMPORARY CROSSING LIMITED TO LIMITS SHOWN. NO PERMANENT IMPACTS TO WATER OF ~~THE U.S. ALLOWED. SEE ESC100 - ESC114~~

KEY MAP
N.T.S.

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PROJECT LAYOUT

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO.	2312-052-02/03
DESIGN:	J. HOLGUIN
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G-008

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\GENERAL SHEETS.dwg – Tab: REF – Plotted: 2/13/2025 12:17 PM By: JAVIER HOLGUIN

SUMMARY OF TRAFFIC CONTROL QUANTITIES

TORO GRANDE BLVD - NORTH			802S-BC.I.P.	803S-MO	870S-A-6WS	870S-A-6WB	870S-A-6YS	870S-A-6YB	870S-A-8WS	870S-A-24WS	870S-E	870S-F	874S-A-4	874S-A-8	874S-A-24	874S-B-6	874S-B-8	874S-B-24	874S-C	874S-E	874S-A-12
			C.I.P. PROJECT SIGNS	BARRICADES, SIGNS, AND TRAFFIC HANDLING	WK ZN PAV MRK (REMOVABLE) 6" W SOLID	WK ZN PAV MRK (REMOVABLE) 6" W BROKEN	WK ZN PAV MRK (REMOVABLE) 6" Y SOLID	WK ZN PAV MRK (REMOVABLE) 6" Y BROKEN	WK ZN PAV MRK (REMOVABLE) 8" W SOLID	WK ZN PAV MRK (REMOVABLE) 24" W SOLID	WK ZN PAV MRK (REMOVABLE) WORDS	WK ZN PAV MRK (REMOVABLE) SYMBOLS	ELIMINATING EXISTING PAV MRK 4"	ELIMINATING EXISTING PAV MRK 8"	ELIMINATING EXISTING PAV MRK 24"	ELIMINATING EXISTING WK ZN PAV MRK 6"	ELIMINATING EXISTING WK ZN PAV MRK 8"	ELIMINATING EXISTING WK ZN PAV MRK 24"	ELIMINATING EXISTING REFL PAV MRK WORDS	ELIMINATING EXISTING REFL PAV MRK SYMBOLS	ELIMINATING EXISTING PAV MRK 12"
SHEET NO.	BEGIN STATION	END STATION	EA	MO	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	EA	EA	LF
TORO GRANDE BLVD - NORTH																					
	26+83.00	30+00.00	1		379	160	472			55	4	4	430	127	51	1011		55	2	2	126
	30+00.00	34+00.00					810						800			810					
	34+00.00	38+00.00					800						800			800					
	38+00.00	42+00.00					800						890			800					
	42+00.00	46+00.00					800						890			800					
	46+00.00	50+00.00					800						840			800					
	50+00.00	54+00.00			229		800						800			800					
	54+00.00	END	1				752			13			792	228	25	752	229	13	2	4	
PROJECT TOTALS			2	20	608	160	6034	0	0	68	4	4	6242	355	76	6573	229	68	4	6	126

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SUMMARY OF TRAFFIC CONTROL QUANTITES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
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2/27/2025

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G-009

SUMMARY OF ROADWAY QUANTITIES

TORO GRANDE BLVD - NORTH			110S-A	132S-A	210S-A	306S	307S	340S-B-6.5D	430S-B	432S-5	433S-A	433S-C	434S	432S-RP-1	432S-RP-1A	432S-RP-1B	TxDOT 531-6004
			STREET EXCAVATION	EMBANKMENT	FLEXIBLE BASE	PRIME COAT	TACK COAT	HOT MIX ASPHALTIC CONCRETE PAVEMENT 6.5 IN, TY D	P.C. CONCRETE CURB AND GUTTER (FINE GRADING)	NEW P.C. CONCRETE SIDEWALKS, 5 INCH THICKNESS	TYPE I P.C. CONCRETE DRIVEWAY	TYPE II P.C. CONCRETE DRIVEWAY	4 INCH P.C. CONCRETE MEDIANS AND ISLANDS	P.C. SIDEWALK CURB RAMP WITH PAVERS (TYPE I)	P.C. SIDEWALK CURB RAMP WITH PAVERS (TYPE IA)	P.C. SIDEWALK CURB RAMP WITH PAVERS (TYPE IB)	CURB RAMPS (TY 1)
SHEET NO.	BEGIN STATION	END STATION	CY	CY	CY	GAL	GAL	SY	LF	SF	SF	SF	SF	EA	EA	EA	EA
TORO GRANDE BLVD - NORTH																	
RD-400	26+83.00	30+00.00	1347	53	828	373	1491	1864	304	2006			882				
RD-401	30+00.00	34+00.00	1284	89	830	373	1493	1867	402	2364			882				
RD-402	34+00.00	38+00.00	1348	68	838	377	1508	1885	400	2400							
RD-403	38+00.00	42+00.00	585		373	168	671	839	50	264							
RD-404	42+00.00	46+00.00	534		316	142	569	711									
RD-405	46+00.00	50+00.00	728	560	733	330	1319	1649	292	2020		1345					
RD-406	50+00.00	54+00.00	1083	198	802	361	1444	1806	400	4552	1166						
RD-407	54+00.00	END	511	298	461	207	830	1037	406	4520			5819			2	
PROJECT TOTALS			7421	1266	5181	2332	9327	11658	2254	18126	1166	1345	7583	0	0	2	0

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SUMMARY OF ROADWAY QUANTITES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
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2/27/2025

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SHEET
G-010

SUMMARY OF DRAINAGE QUANTITIES

TORO GRANDE BLVD - NORTH			506 CN6	506 J8X8	506 J8X12	506 M4	506 M5	508S-I10S	508S-H13	509S-1	510-ASD-3 18" DIA	510-ASD-4 18" DIA	510-ASD-3 24" DIA	510-ASD 36" DIA
			CONNECTION TO EXISTING 6' MANHOLE	JUNCTION BOX, 8 FT. X 8 FT.	JUNCTION BOX, 8 FT. X 12 FT.	STANDARD PRE-CAST MANHOLE W/PRE-CAST BASE, 4' DIA.	STANDARD PRE-CAST MANHOLE W/PRE-CAST BASE, 5' DIA.	CURB INLET (10')	HEADWALLS, TYPE 13, 7'X2' RBC	TRENCH EXCAVATION SAFETY PROTECTIVE SYSTEMS (ALL DEPTHS)	RC PIPE CL III (18-IN)	RC PIPE CL IV (18-IN)	RC PIPE CL III (24-IN)	RC PIPE CL IV (36-IN)
SHEET NO.	BEGIN STATION	END STATION	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF
STRM - D														
SD-214	9+75.00	14+50.00		1			1	2		657	133	135		389
SD-215	14+50.00	19+25.00				1		2		485	485			
SD-216	0+75.00	3+00.00								145				
STRM - E														
SD-217	9+50.00	14+00.00			1		1	1	1	443	77		176	
SD-218	14+00.00	18+50.00								450	450			
SD-219	18+50.00	22+50.00				2		3		455	455			
STRM - F														
SD-220	9+75.00	13+00.00	1			2		2		284	284			
PROJECT TOTALS			1	1	1	5	2	10	1	2918	1884	135	176	389

SUMMARY OF DRAINAGE QUANTITIES

TORO GRANDE BLVD - NORTH			559S-4X3	559S-4X3	559S-5X3	559S-7X2	TxDOT 467 6147	SP506 M6	SS508 I10C
			PRECAST CONCRETE BOX CULVERTS 3 FT. X 2 FT.	PRECAST CONCRETE BOX CULVERTS 4 FT. X 3 FT.	PRECAST CONCRETE BOX CULVERTS 5 FT. X 3 FT.	PRECAST CONCRETE BOX CULVERTS 7 FT. X 2 FT.	SET (TY I)(S= 5 FT)(HW= 4 FT)(4:1) (P)	STORMCEPTOR STC1800	10' SHALLOW TYPE-C CURB INLET
SHEET NO.	BEGIN STATION	END STATION	LF	LF	LF	LF	EA	EA	EA
STRM - D									
SD-214	9+75.00	14+50.00						1	2
SD-215	14+50.00	19+25.00							
SD-216	0+75.00	3+00.00		72	73		1		
STRM - E									
SD-217	9+50.00	14+00.00	112			77		1	
SD-218	14+00.00	18+50.00							
SD-219	18+50.00	22+50.00							
STRM - F									
SD-220	9+75.00	13+00.00							
PROJECT TOTALS			112	72	73	77	1	2	2

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

SUMMARY OF DRAINAGE QUANTITES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
G-011

m

TORO GRANDE BLVD - NORTH			824S	863S-2	863S-3	871S-A-6WS	871S-A-6WB	871S-A-6YS	871S-A-6YB	871S-A-8WS	871S-A-8WD	871S-A-8YS	871S-A-24WS	871S-A-24YS
			TRAFFIC SIGNS	REFLECTORIZED PAVEMENT MARKERS (TYPE I-C)	REFLECTORIZED PAVEMENT MARKERS (TYPE II-A-A)	REFL PAV MRK TY 1 6" 100 MIL (W-SOLID)	REFL PAV MRK TY 1 6" 100 MIL (W-BROKEN)	REFL PAV MRK TY 1 6" 100 MIL (Y-SOLID)	REFL PAV MRK TY 1 6" 100 MIL (Y-BROKEN)	REFL PAV MRK TY 1 8" 100 MIL (W-SOLID)	REFL PAV MRK TY 1 8" 100 MIL (W-DOT)	REFL PAV MRK TY 1 8" 100 MIL (Y-SOLID)	REFL PAV MRK TY 1 24" 100 MIL (W-SOLID)	REFL PAV MRK TY 1 24" 100 MIL (Y-SOLID)
SHEET NO.	BEGIN STATION	END STATION	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF
TORO GRANDE BLVD - NORTH						0	0	0	0	0	0	0	0	0
SPM-108	BEGIN	34+00.00	3	67	9	0	315	498	100	653	96	0	405	0
SPM-109	34+00.00	4200		20	40	0	400	1600	400	207	0	0	0	0
SPM-110	42+00.00	50+00.00		20	40	0	400	1600	400	0	0	0	0	0
SPM-111	50+00.00	END	3	15	47	0	310	1065	160	628	0	0	167	0
PROJECT TOTALS			6	122	136	0	1425	4763	1060	1488	96	0	574	0

SUMMARY OF SIGNING AND PAVEMENT QUANTITIES

TORO GRANDE BLVD - NORTH			871S-B-WORD-W	871S-D-ARROW-W	871S-E-6WS	871S-E-6WB	871S-E-6YS	871S-E-6YB	871S-E-8WS	871S-E-8WD	871S-E-8YS	871S-E-24WS	871S-E-24YS	871S-F-WORD-W	871S-H-ARROW-W
			REFL PAV MRK TY 1 WORD 100 MIL (W)	REFL PAV MRK TY 1 ARROW 100 MIL (W)	REFL PAV MRK TY 2 6" (W-SOLID)	REFL PAV MRK TY 2 6" (W-BROKEN)	REFL PAV MRK TY 2 6" (Y-SOLID)	REFL PAV MRK TY 2 6" (Y-BROKEN)	REFL PAV MRK TY 2 8" (W-SOLID)	REFL PAV MRK TY 2 8" (W-DOT)	REFL PAV MRK TY 2 8" (Y-SOLID)	REFL PAV MRK TY 2 24" (W-SOLID)	REFL PAV MRK TY 2 24" (Y-SOLID)	REFL PAV MRK TY 2 WORD (W)	REFL PAV MRK TY 2 ARROW (W)
SHEET NO.	BEGIN STATION	END STATION	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA
TORO GRANDE BLVD - NORTH			0	0											
SPM-108	BEGIN	34+00.00	7	7		315	498	100	653	96		405		7	7
SPM-109	34+00.00	4200	0	2		400	1600	400	207					0	2
SPM-110	42+00.00	50+00.00	0	2		400	1600	400							2
SPM-111	50+00.00	END	4	6		310	1065	160	628			167		4	6
PROJECT TOTALS			11	17	0	1425	4763	1060	1488	96	0	574	0	11	17

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

SUMMARY OF SIGNING AND PAVEMENT MARKING QUANTITIES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
G-012

SUMMARY OF REMOVAL QUANTITIES

TORO GRANDE BLVD - NORTH			101S-B	104S-A	104S-C	SP104S-H
			PREPARING RIGHT-OF-WAY	REMOVE P.C. CONCRETE CURB	REMOVE P.C. CONCRETE SIDEWALKS AND DRIVEWAYS	REMOVE CONCRETE INLET
SHEET NO.	BEGIN STATION	END STATION	PER 100 FT STATION	LF	SF	EA
RM-101	TORO GRANDE BLVD - NORTH		31	-	-	-
RM-104	BEGIN	34+00	-	482	381	1
RM-105	34+00	42+00	-	975	49	2
RM-106	42+00	50+00	-	1238	945	1
RM-107	50+00	END	-	498	-	-
PROJECT TOTALS			**31**	**3193**	**381**	**4**

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY, SUITE 820
AUSTIN, TEXAS 78759
512.834.2789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

SUMMARY OF REMOVAL QUANTITES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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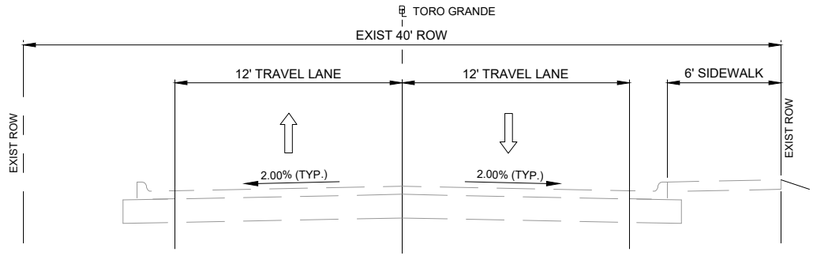
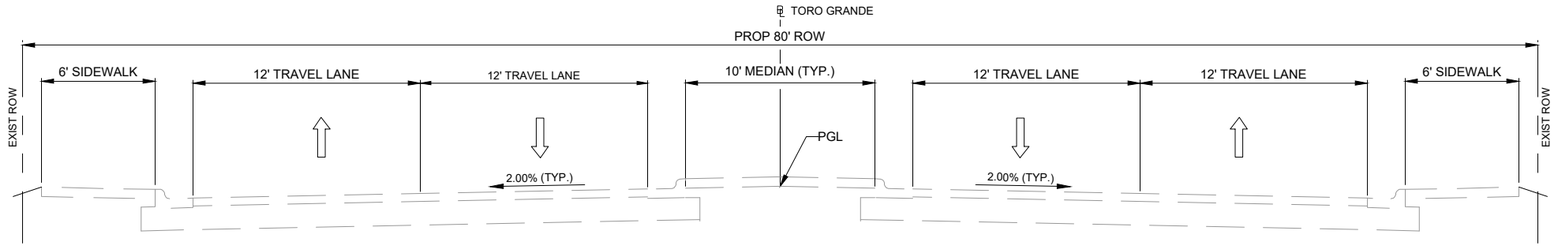
SHEET
G-014



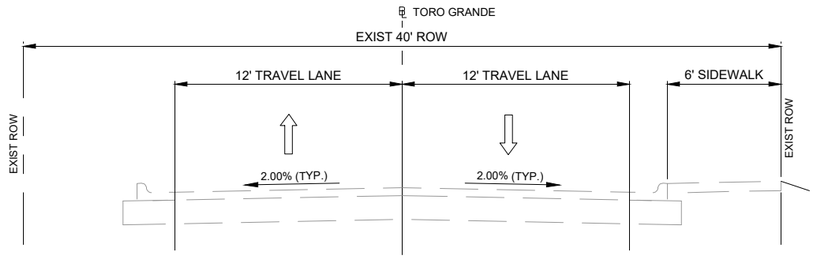
EXISTING TORO GRANDE NORTH TYPICAL SECTION 1

STA 27+34.90 TO STA 38+48.95



EXISTING TORO GRANDE NORTH TYPICAL SECTION 2

STA 38+48.95 TO STA 47+07.59



EXISTING TORO GRANDE NORTH TYPICAL SECTION 3

STA 47+07.59 TO STA 49+46.82

REV. NO. | REVISION DESCRIPTION | APPROVED BY: | DATE

CobbFendley

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AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

EXISTING TYPICAL SECTIONS

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SHEET
G-015

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\TYPICAL SECTIONS\EXISTING TYPICAL SECTIONS.dwg – Tab: EXISTING TYPICAL SECTIONS – Plotted: 2/13/2025 12:18 PM By: JAVIER HOLGUIN

SUMMARY OF EROSION AND SEDIMENTATION CONTROL QUANTITIES								
TORO GRANDE BLVD - NORTH			604S-B	605S-A	632S	639S	641S	642S-A	648S
			NATIVE SEEDING FOR EROSION CONTROL, BROADCAST SEEDING	SOIL RETENTION BLANKET	STORM INLET SEDIMENT TRAP	ROCK BERM	STABILIZED CONSTRUCTION ENTRANCE	SILT FENCE FOR EROSION CONTROL	MULCH SOCK
SHEET NO.	BEGIN STATION	END STATION	SY	SY	LF	LF	EA	LF	LF
TORO GRANDE BLVD - NORTH									
ESC-108	BEGIN	34+00.00	1443	1443	44			657	
ESC-109	34+00.00	42+00.00	1156	1156	66	56		581	
ESC-110	42+00.00	50+00.00	805	805	44			309	
ESC-111	50+00.00	END	1672	1672	66			748	
PROJECT TOTALS			5076	5076	220	56	0	2295	0

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046705
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

SUMMARY OF EROSION AND SEDIMENTATION CONTROL QUANTITES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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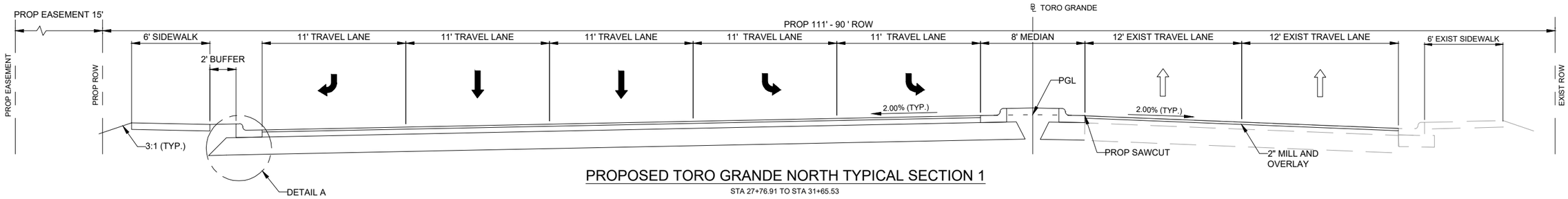
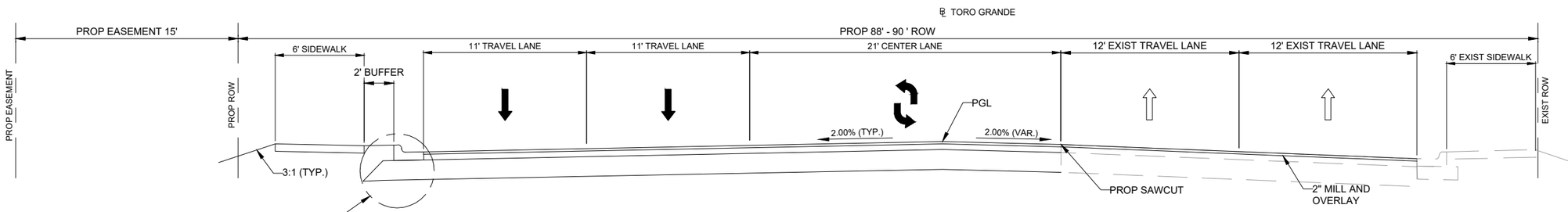
SHEET
G-013



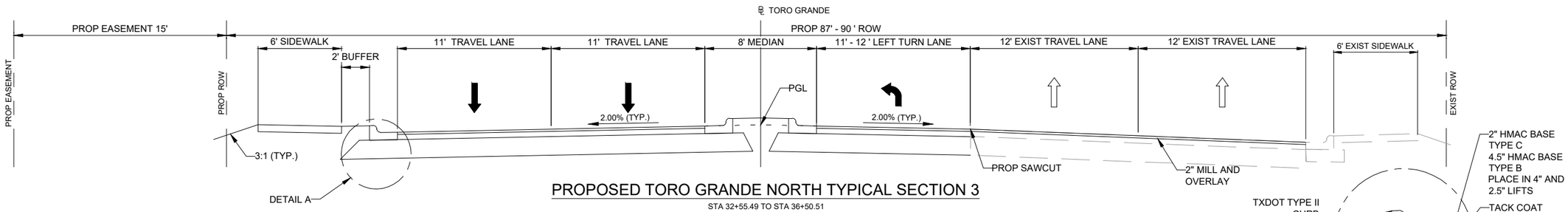
PROPOSED TORO GRANDE NORTH TYPICAL SECTION 1

STA 27+76.91 TO STA 31+65.53



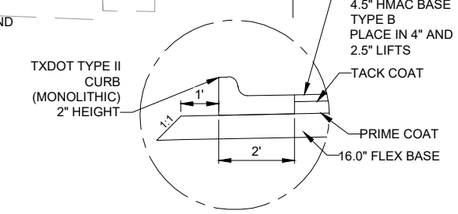
PROPOSED TORO GRANDE NORTH TYPICAL SECTION 2

STA 31+65.53 TO STA 32+55.49



PROPOSED TORO GRANDE NORTH TYPICAL SECTION 3

STA 32+55.49 TO STA 36+50.51



DETAIL A EDGE OF PAVEMENT

N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY, SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

PROPOSED TORO GRANDE NORTH TYPICAL SECTIONS (1 OF 3)

TORO GRANDE ROADWAY IMPROVEMENTS CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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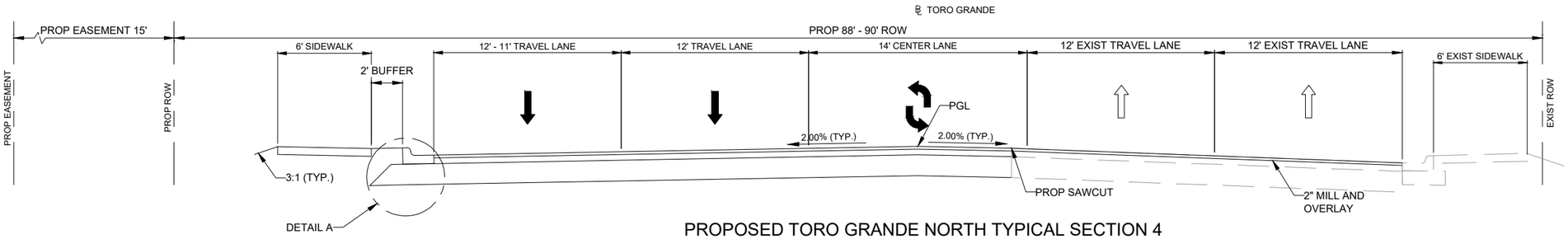
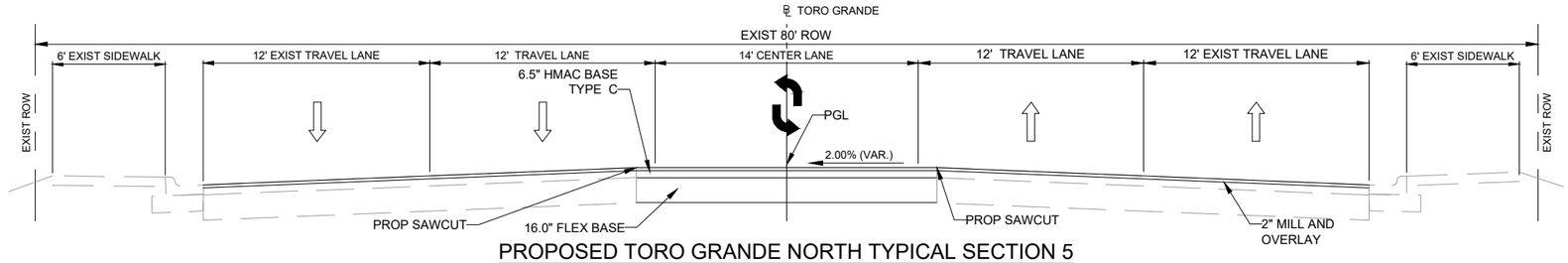
SHEET
G-016



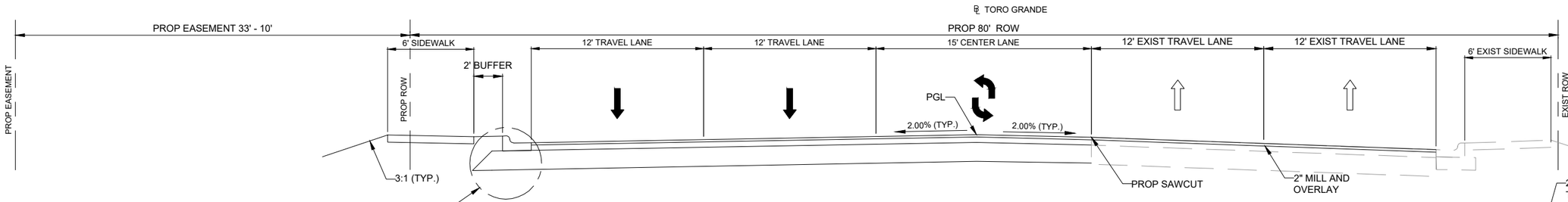
PROPOSED TORO GRANDE NORTH TYPICAL SECTION 4

STA 36+50.51 TO STA 38+48.95



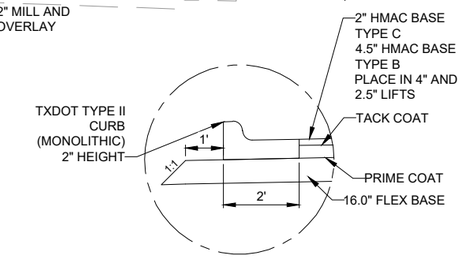
PROPOSED TORO GRANDE NORTH TYPICAL SECTION 5

STA 38+48.95 TO STA 47+07.59



PROPOSED TORO GRANDE NORTH TYPICAL SECTION 6

STA 47+07.59 TO STA 48.71.74



DETAIL A EDGE OF PAVEMENT

N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046705
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

PROPOSED TORO GRANDE NORTH TYPICAL SECTIONS (2 OF 3)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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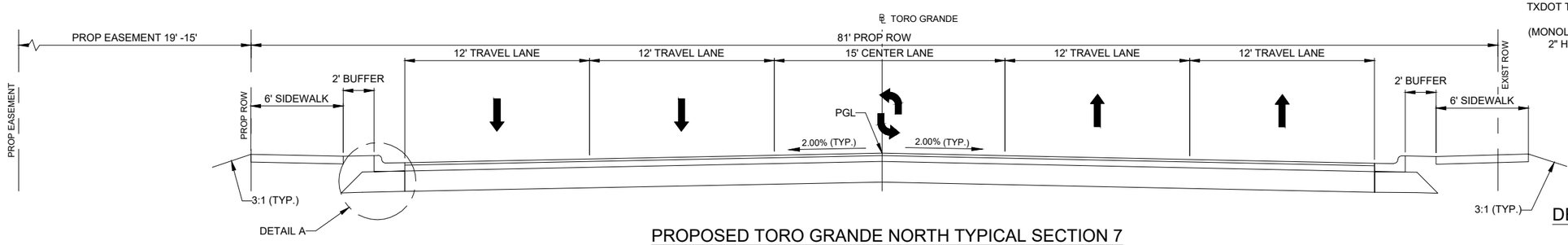
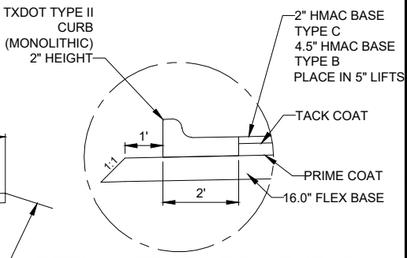
SHEET
G-017



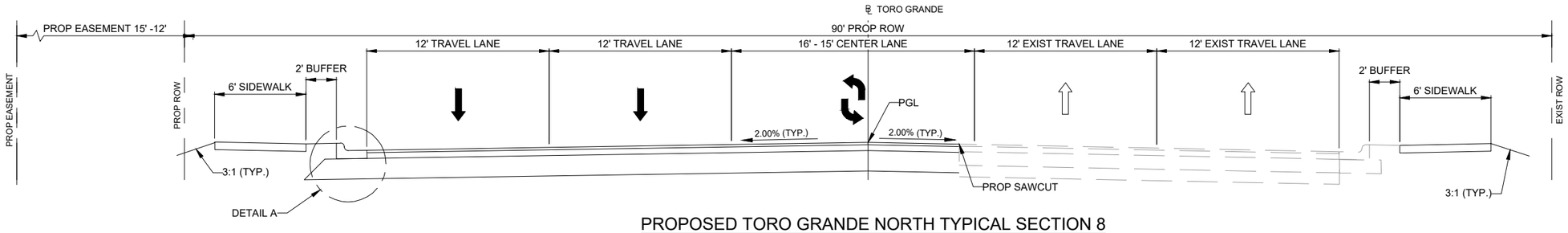
PROPOSED TORO GRANDE NORTH TYPICAL SECTION 7

STA 48+71.14 TO STA 49+46.82



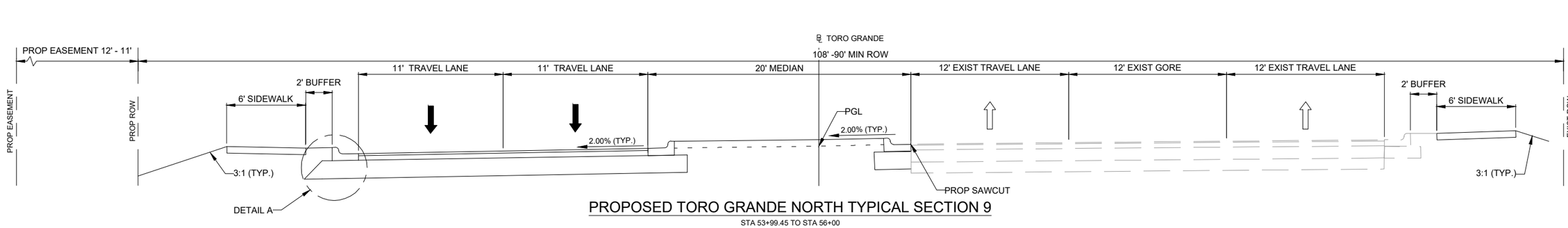
DETAIL A EDGE OF PAVEMENT

N.T.S.



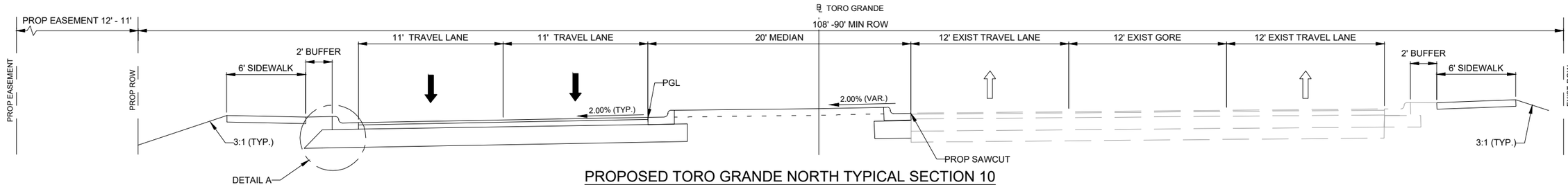
PROPOSED TORO GRANDE NORTH TYPICAL SECTION 8

STA 49+46.82 TO STA 53+99.45



PROPOSED TORO GRANDE NORTH TYPICAL SECTION 9

STA 53+99.45 TO STA 56+00



PROPOSED TORO GRANDE NORTH TYPICAL SECTION 10

STA 56+00 TO STA 57+70.55

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046703
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AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

PROPOSED TORO GRANDE NORTH TYPICAL SECTIONS (3 OF 3)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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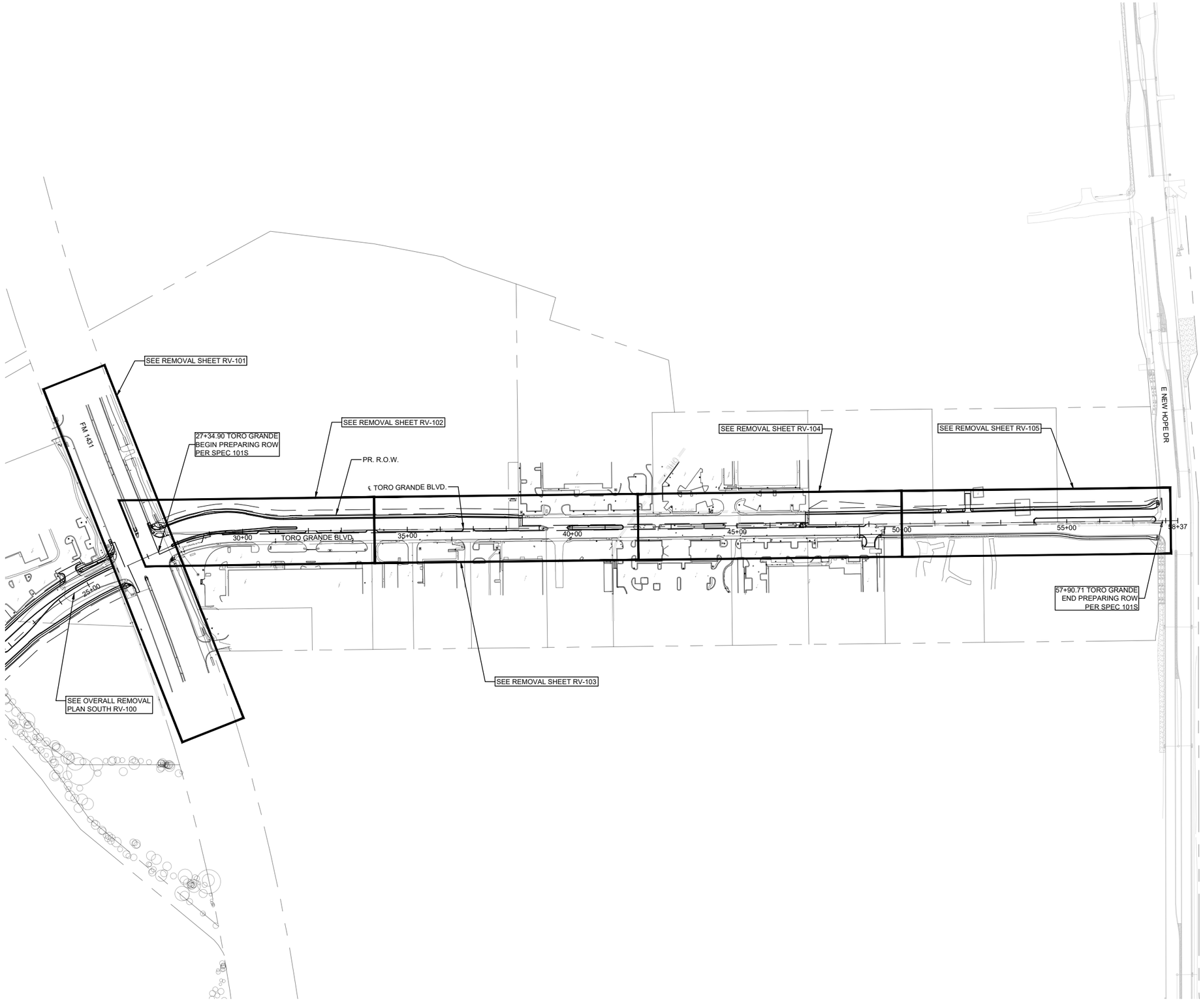
SHEET
G-018



NOTE

1. REMOVAL OF EXISTING ABANDONED UTILITY POLES AND STRUCTURES, FENCES, STREET END BARRICADES, AND ANYTHING ELSE NOT CALLED OUT ARE SUBSIDIARY TO ITEM NO. 101S PREPARING RIGHT-OF-WAY. NO ADDITIONAL PAYMENT.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
3. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. DRIVEWAYS DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. NO SEPARATE PAY ITEM.
5. REMOVING PAVEMENT IS INCLUDED IN THE COST OF PREPARING ROW (SPEC 101S).
6. REMOVAL OF WATER ITEMS ARE CALLED OUT ON THE TORO GRANDE WATER LINE PLANS.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

OVERALL REMOVAL PLAN NORTH

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: R. NEWTON
DRAWN: R. NEWTON
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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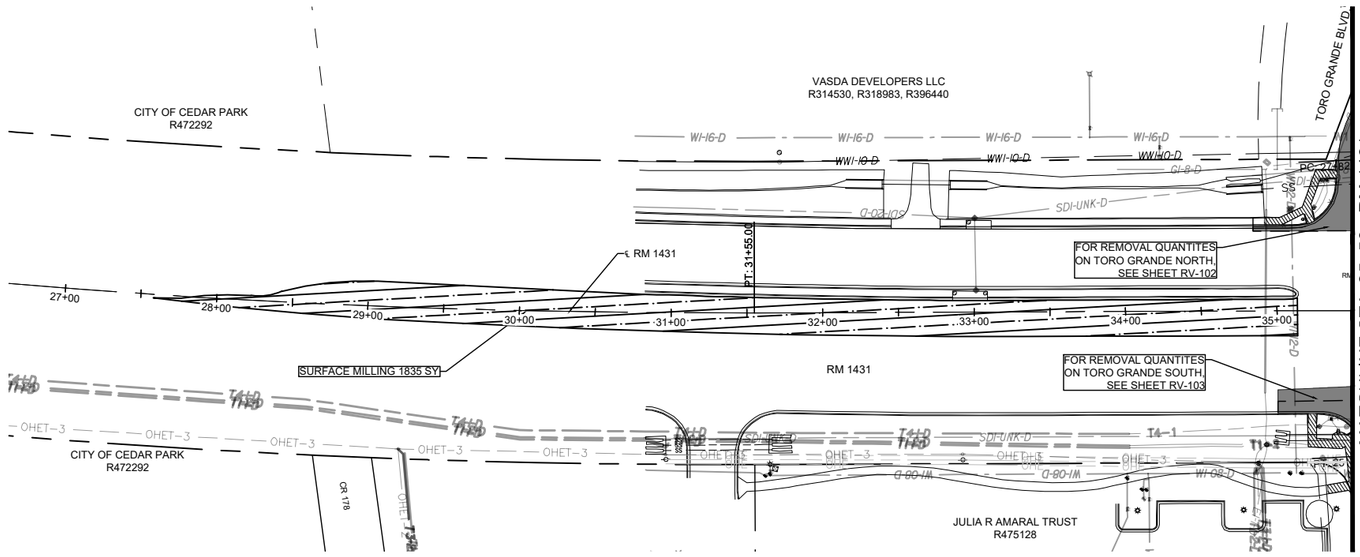
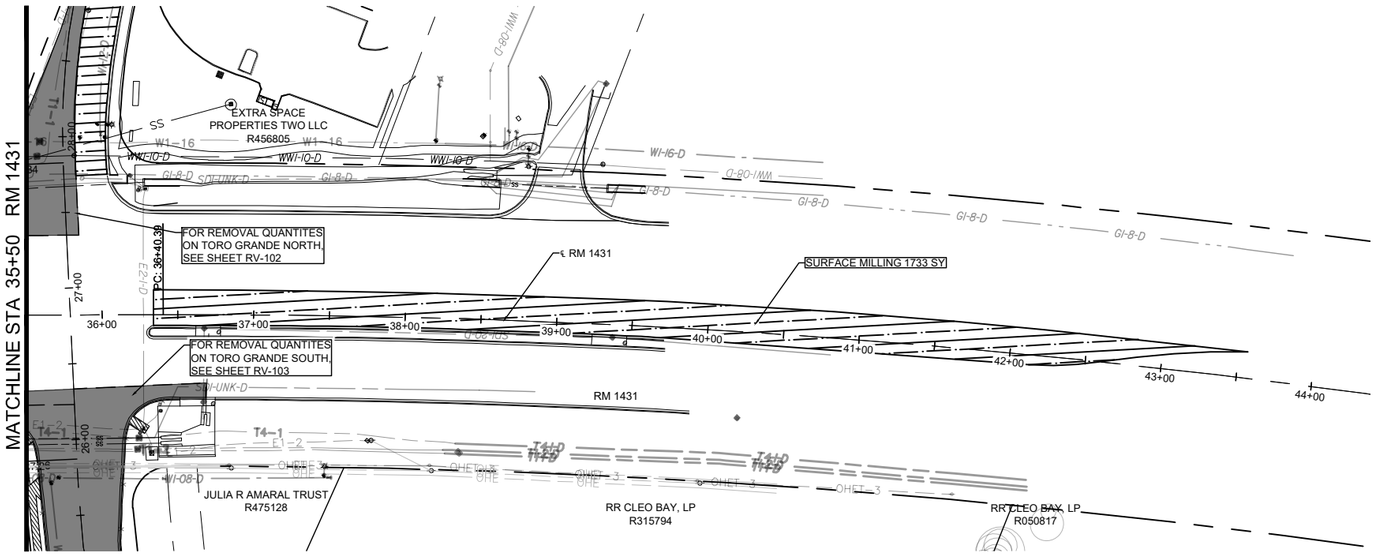
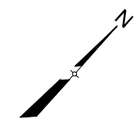
SHEET
RV-100







LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- REMOVE CURB AND GUTTER
- REMOVE SIDEWALK
- REMOVE DRIVEWAY
- REMOVE PAVEMENT
- SAWCUT LINE
- SURFACE MILLING

NOTE

1. REMOVAL OF EXISTING ABANDONED UTILITY POLES AND STRUCTURES, FENCES, STREET END BARRICADES, AND ANYTHING ELSE NOT CALLED OUT ARE SUBSIDIARY TO ITEM NO. 101S PREPARING RIGHT-OF-WAY. NO ADDITIONAL PAYMENT.
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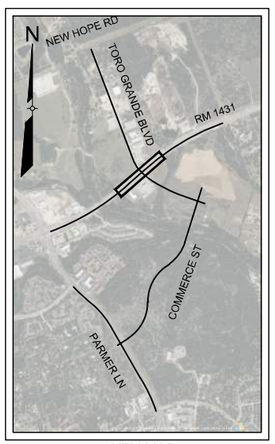
3. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. DRIVEWAYS DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. NO SEPARATE PAY ITEM.
5. REMOVING PAVEMENT IS INCLUDED IN THE COST OF PREPARING ROW (SPEC 1015).
6. REMOVAL OF WATER ITEMS ARE CALLED OUT ON THE TORO GRANDE WATER LINE PLANS.



KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274 , LAND SURVEYING FIRM NO. - 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

REMOVAL PLAN RM 1431 INTERSECTION

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: R. NEWTON
DRAWN: R. NEWTON
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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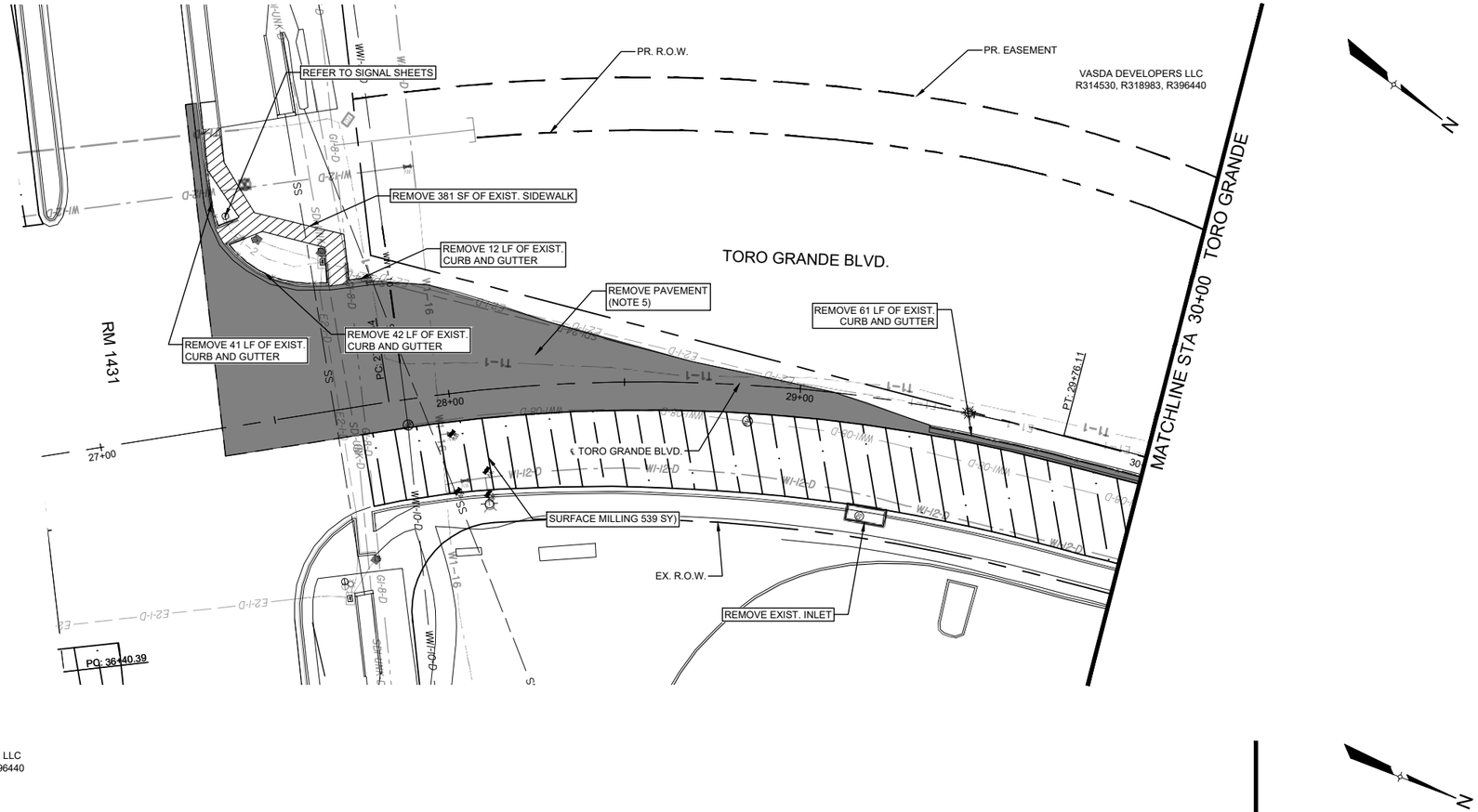
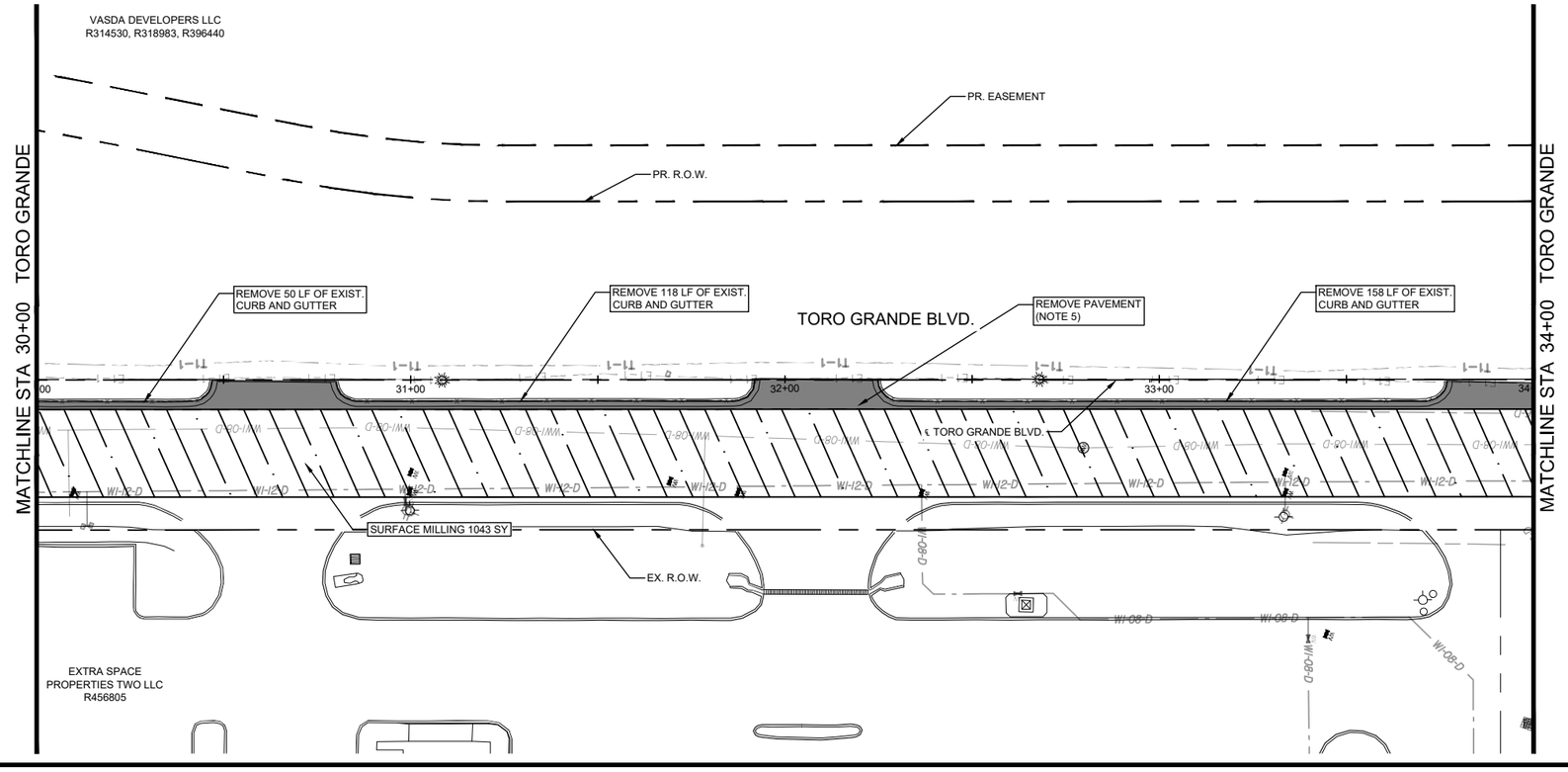
SHEET
RV-101





LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- REMOVE CURB AND GUTTER
- REMOVE SIDEWALK
- REMOVE DRIVEWAY
- REMOVE PAVEMENT
- SAWCUT LINE
- SURFACE MILLING

NOTE

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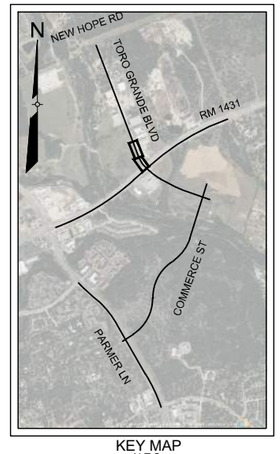
6. REMOVAL OF WATER ITEMS ARE CALLED OUT ON THE TORO GRANDE WATER LINE PLANS.



KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274 , LAND SURVEYING FIRM NO. - 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

REMOVAL PLAN BEGIN TO STA 34+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

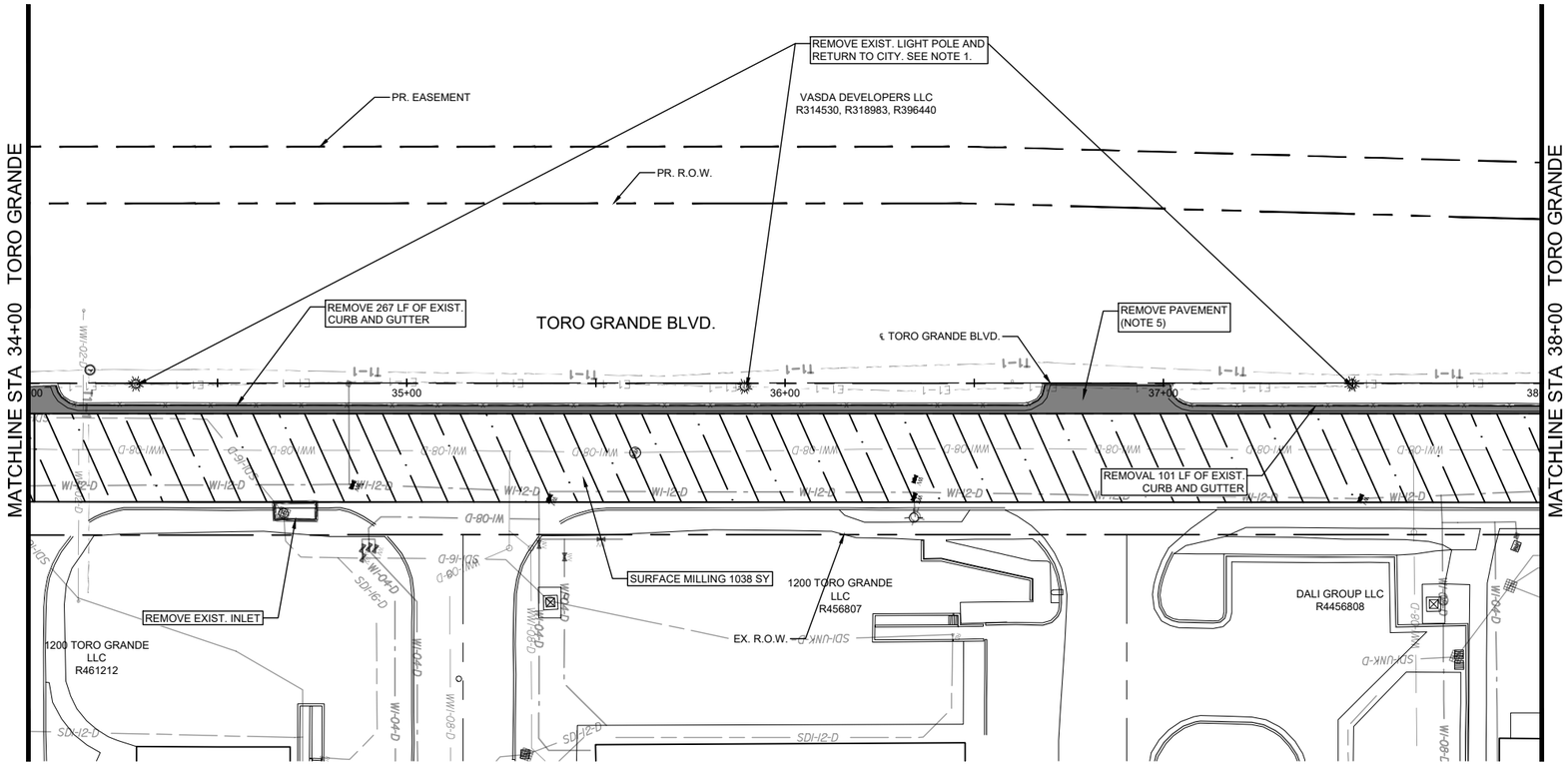
CEDAR PARK

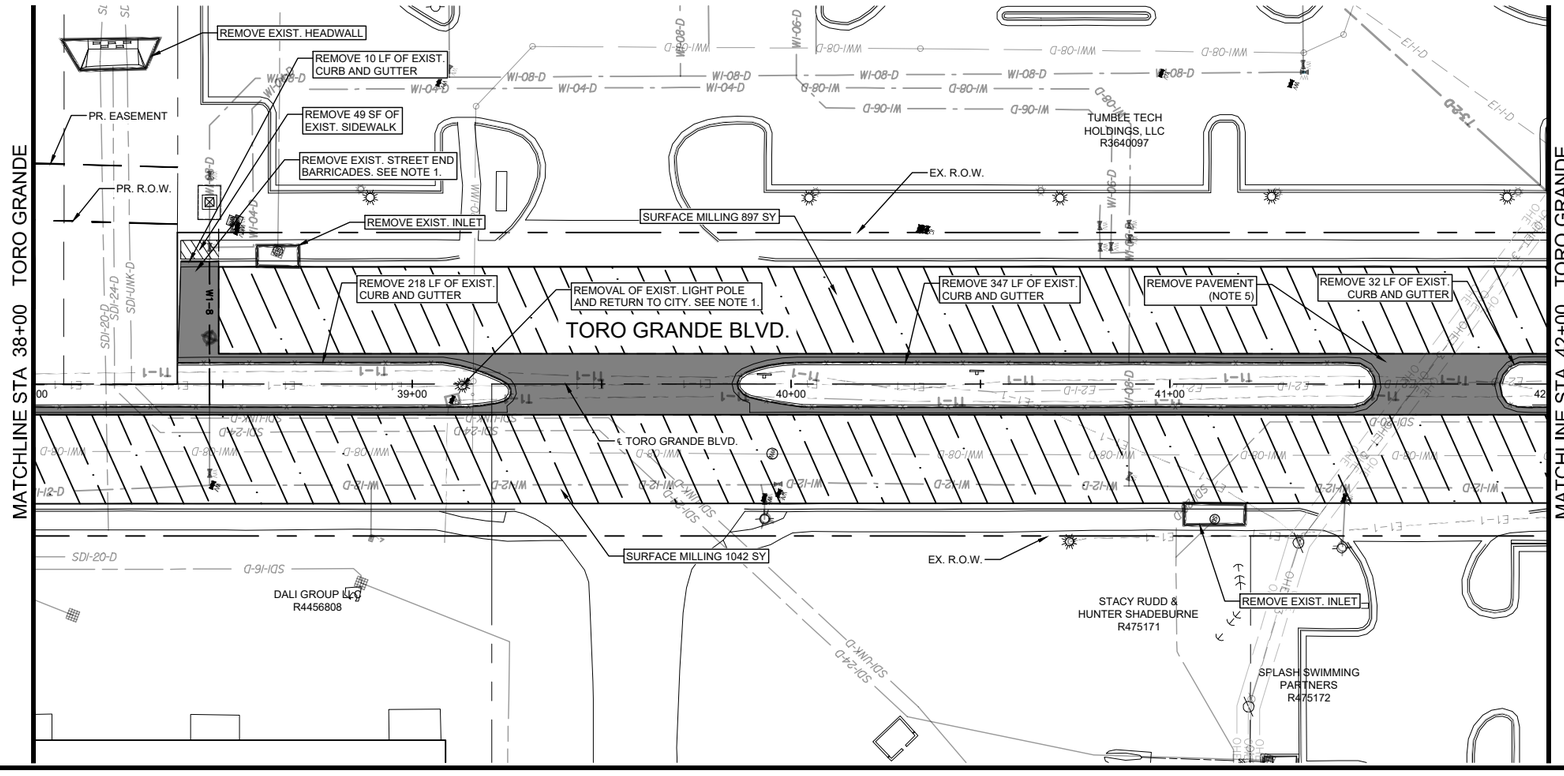
PROJ. NO. 2312-052-02/03
DESIGN: R. NEWTON
DRAWN: R. NEWTON
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
RV-102

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-REMOVAL-01.dwg -- Tab: REMOVAL PLAN BEGIN TO STA 34+00 -- Plotted: 2/12/2025 7:50 PM By: JAVIER HOLGUIN





LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- REMOVE CURB AND GUTTER
- REMOVE SIDEWALK
- REMOVE DRIVEWAY
- REMOVE PAVEMENT
- SAWCUT LINE
- SURFACE MILLING

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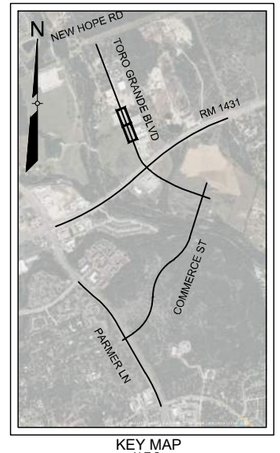

KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046703
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

REMOVAL PLAN STA 34+00 TO 42+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: R. NEWTON
DRAWN: R. NEWTON
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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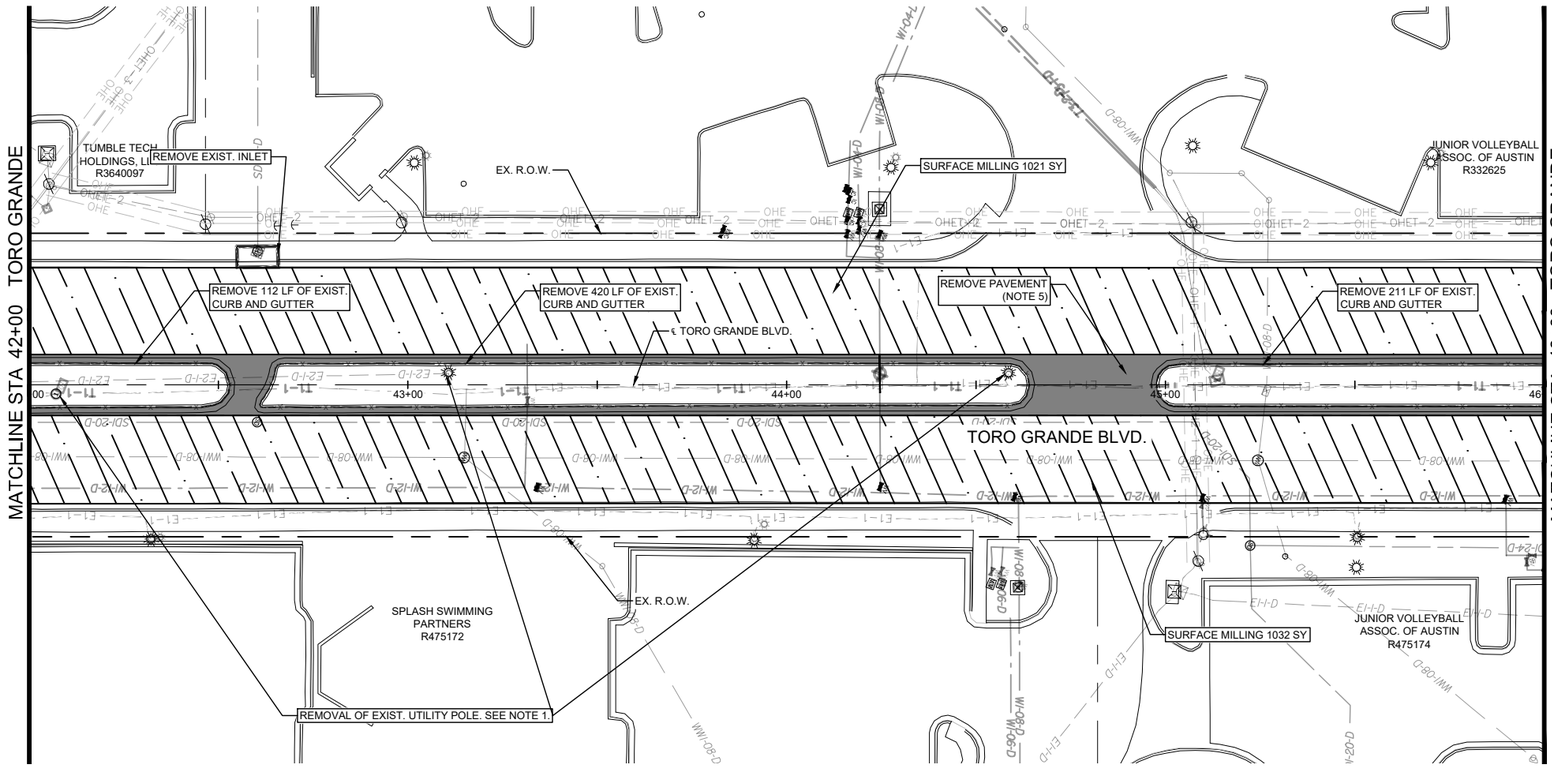
SHEET
RV-103



LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- REMOVE CURB AND GUTTER
- REMOVE SIDEWALK
- REMOVE DRIVEWAY
- REMOVE PAVEMENT
- SAWCUT LINE
- SURFACE MILLING

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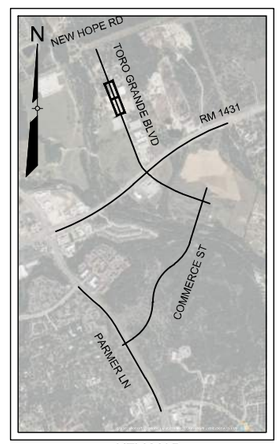


KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

REMOVAL PLAN STA 42+00 TO 50+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

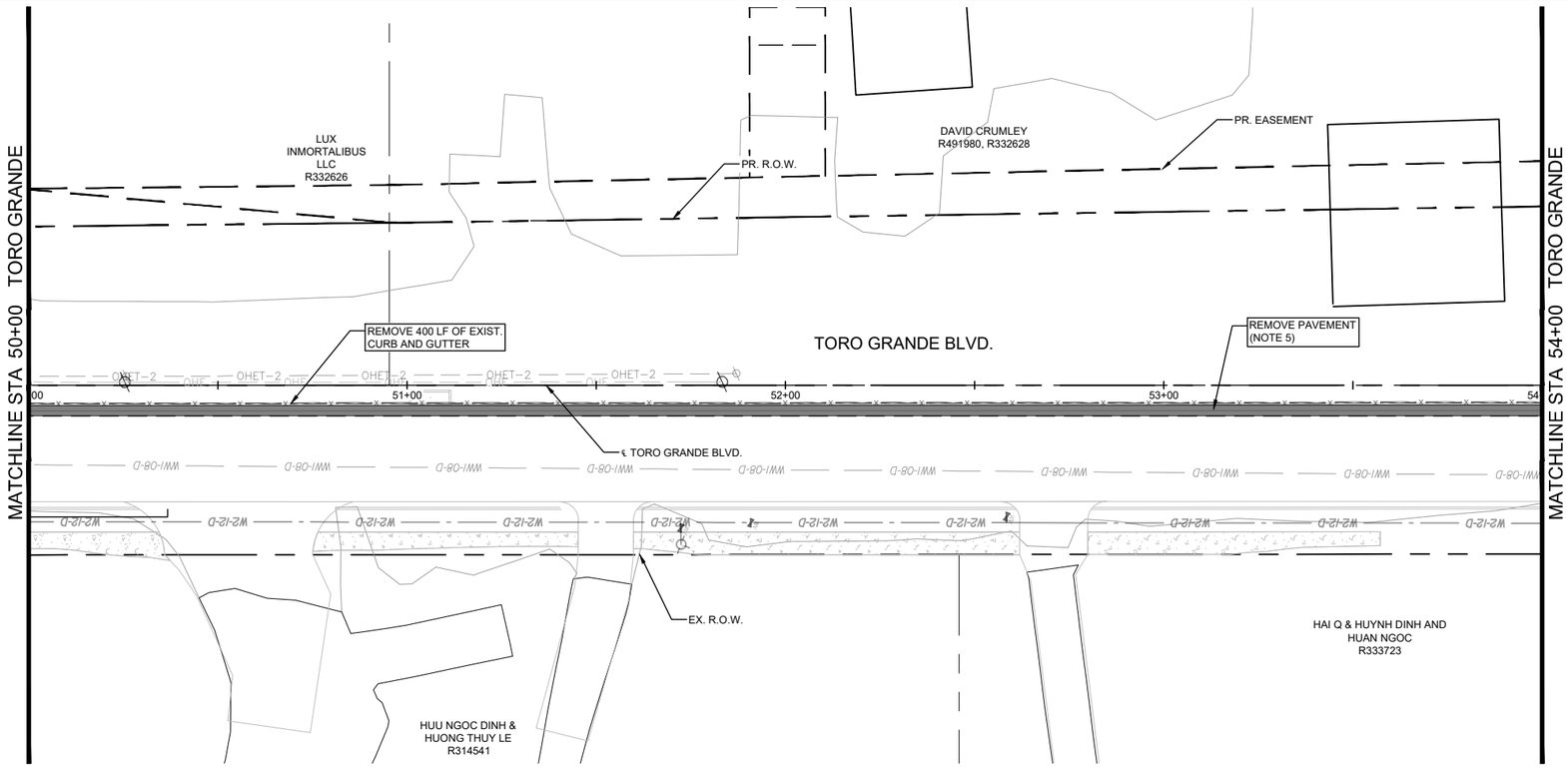
CEDAR PARK

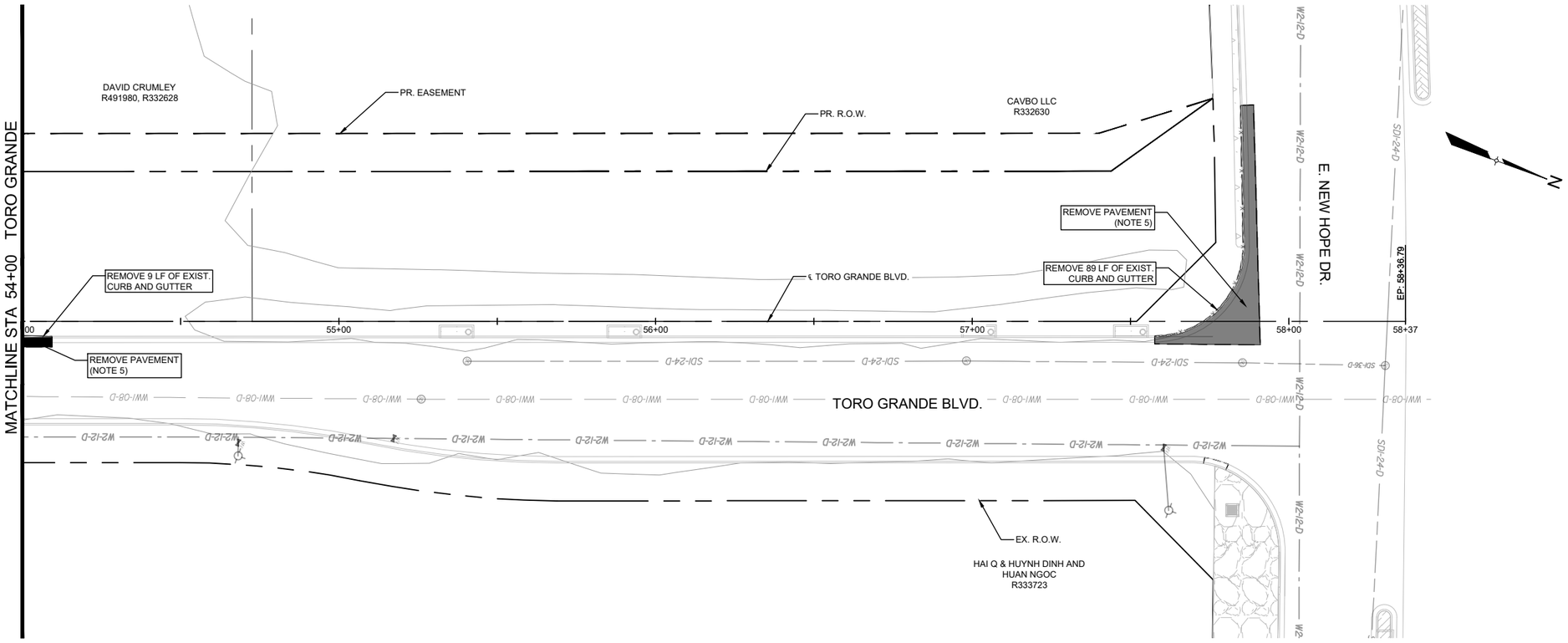
PROJ. NO. 2312-052-02/03
DESIGN: R. NEWTON
DRAWN: R. NEWTON
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
RV-104





LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- REMOVE CURB AND GUTTER
- REMOVE SIDEWALK
- REMOVE DRIVEWAY
- REMOVE PAVEMENT
- SAWCUT LINE
- SURFACE MILLING

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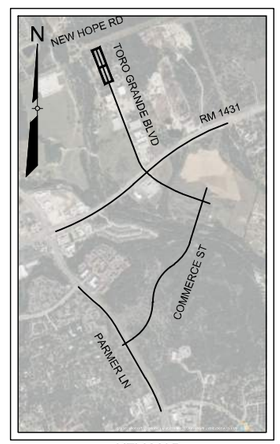

KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

REMOVAL PLAN STA 50+00 TO END

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: R. NEWTON
DRAWN: R. NEWTON
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
RV-105

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-REMOVAL-01.dwg - Tab: REMOVAL PLAN STA 50+00 TO END - Plotted: 2/12/2025 7:50 PM By: JAVIER HOLGUIN

Horizontal Alignment Report

Horizontal Alignment Report

****
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Report Date: 9/4/2024 4:57:55 PM
Alignment Name: DRWY-02
Station Range: Start: 1+00.00, End: 1+74.65
Description:
****

Begin DRWY-02
N 10,170,890.26 E 3,100,975.52 1+00.00

Line (1)
N69° 08' 11"E 74.65'
N 10,170,916.84 E 3,101,045.28 1+74.65
Line (1)

N 10,170,916.84 E 3,101,045.28 1+74.65
End DRWY-02

****
Alignment Length: 74.65'
****

****
File:
\\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-100-ROAD-DATA.dwg
Report Date: 9/4/2024 4:57:55 PM
Alignment Name: DRWY-03
Station Range: Start: 1+00.00, End: 1+60.01
Description:
****

Begin DRWY-03
N 10,171,098.85 E 3,100,895.97 1+00.00

Line (1)
S69° 07' 27"W 60.01'
N 10,171,077.46 E 3,100,839.90 1+60.01
Line (1)

N 10,171,077.46 E 3,100,839.90 1+60.01
End DRWY-03

****
Alignment Length: 60.01'
****

****
File:
\\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-100-ROAD-DATA.dwg
Report Date: 9/4/2024 4:57:55 PM
Alignment Name: DRWY-04
Station Range: Start: 1+00.00, End: 1+99.97
Description:
****

Begin DRWY-04
N 10,171,166.86 E 3,100,870.03 1+00.00

Line (1)
S69° 07' 27"W 99.97'
N 10,171,131.24 E 3,100,776.62 1+99.97
Line (1)

N 10,171,131.24 E 3,100,776.62 1+99.97
End DRWY-04

****
Alignment Length: 99.97'
****

****
File:
\\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-100-ROAD-DATA.dwg
Report Date: 9/4/2024 4:57:55 PM
Alignment Name: FM 1431
Station Range: Start: 10+00.00, End: 58+28.73
Description:
****

Begin FM 1431
N 10,167,459.90 E 3,099,690.20 10+00.00

Curve (1)
BC N 10,167,459.90 E 3,099,690.20 10+00.00
CTR N 10,172,827.47 E 3,097,685.90
PI N 10,167,841.33 E 3,100,711.70

Direction Back N69° 31' 26"E
Radius 5,729.58'
Delta 21°33'00"(LT)
Length 2,155.00'
Tangent 1,090.39'
Chord Direction N58° 44' 56"E Distance 2,142.32'
Direction Ahead N47° 58' 26"E

EC N 10,168,571.31 E 3,101,521.68 31+55.00
Curve (1)

Line (2)
N47° 58' 26"E 485.39'
N 10,168,896.27 E 3,101,882.25 36+40.39
Line (2)

Curve (3)
BC N 10,168,896.27 E 3,101,882.25 36+40.39
CTR N 10,164,640.11 E 3,105,718.02
PI N 10,169,637.81 E 3,102,705.06

Direction Back N47° 58' 26"E
Radius 5,729.58'
Delta 21°53'00"(RT)
Length 2,188.33'
Tangent 1,107.66'
Chord Direction N58° 54' 56"E Distance 2,175.06'
Direction Ahead N69° 51' 26"E

EC N 10,170,019.25 E 3,103,744.98 58+28.73
Curve (3)

N 10,170,019.25 E 3,103,744.98 58+28.73
End FM 1431

****
Alignment Length: 4,828.73'
****

****
File:
\\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-100-ROAD-DATA.dwg
Report Date: 9/4/2024 4:57:55 PM
Alignment Name: TORO GRANDE
Station Range: Start: 10+00.00, End: 58+36.79
Description:
****

Begin TORO GRANDE
N 10,168,115.82 E 3,103,328.72 10+00.00

Line (1)
N70° 37' 44"W 702.01'
N 10,168,348.66 E 3,102,666.45 17+02.01
Line (1)

Curve (2)
BC N 10,168,348.66 E 3,102,666.45 17+02.01
CTR N 10,169,292.05 E 3,102,998.13
PI N 10,168,371.20 E 3,102,602.33

Direction Back N70° 37' 44"W
Radius 1,000.00'
Delta 7°46'33"(RT)
Length 135.72'
Tangent 67.96'
Chord Direction N66° 44' 28"W Distance 135.61'
Direction Ahead N62° 51' 11"W

EC N 10,168,402.21 E 3,102,541.86 18+37.72
Curve (2)

Line (3)
N62° 51' 11"W 428.11'
N 10,168,597.55 E 3,102,160.91 22+65.83
Line (3)

Curve (4)
BC N 10,168,597.55 E 3,102,160.91 22+65.83
CTR N 10,169,487.39 E 3,102,617.19
PI N 10,168,671.51 E 3,102,016.66

Direction Back N62° 51' 11"W
Radius 1,000.00'
Delta 18°24'59"(RT)
Length 321.43'
Tangent 162.11'
Chord Direction N53° 38' 41"W Distance 320.04'
Direction Ahead N44° 26' 12"W

EC N 10,168,787.27 E 3,101,903.16 25+87.26
Curve (4)

Line (5)
N44° 26' 12"W 195.58'
N 10,168,926.91 E 3,101,766.23 27+82.84
Line (5)

Curve (6)
BC N 10,168,926.91 E 3,101,766.23 27+82.84
CTR N 10,169,255.97 E 3,102,101.82
PI N 10,168,996.90 E 3,101,697.61

Direction Back N44° 26' 12"W
Radius 470.00'
Delta 23°33'39"(RT)
Length 193.27'
Tangent 98.02'
Chord Direction N32° 39' 23"W Distance 191.91'
Direction Ahead N20° 52' 33"W

EC N 10,169,088.49 E 3,101,662.68 29+76.11
Curve (6)

Line (7)
N20° 52' 33"W 2,860.68'
N 10,171,761.38 E 3,100,643.29 58+36.79
Line (7)

N 10,171,761.38 E 3,100,643.29 58+36.79
End TORO GRANDE

****
Alignment Length: 4,836.79'
****

****
File:
\\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-100-ROAD-DATA.dwg
Report Date: 9/4/2024 4:57:55 PM
Alignment Name: W PARMER LN
Station Range: Start: 10+00.00, End: 45+59.30
Description:
****

Begin W PARMER LN
N 10,163,216.49 E 3,102,172.98 10+00.00

Curve (1)
BC N 10,163,216.49 E 3,102,172.98 10+00.00
CTR N 10,162,038.70 E 3,098,666.26
PI N 10,163,626.87 E 3,102,035.15

Direction Back N18° 33' 56"W
Radius 3,699.23'
Delta 13°20'58"(LT)
Length 861.89'
Tangent 432.90'
Chord Direction N25° 14' 25"W Distance 859.94'
Direction Ahead N31° 54' 54"W

EC N 10,163,994.33 E 3,101,806.29 18+61.89
Curve (1)

Line (2)
Non-Tangent Radial Bearing N58° 05' 06"E
N30° 01' 18"W 1,329.03'
N 10,165,145.06 E 3,101,141.34 31+90.92
Line (2)

Non-Tangent Radial Bearing N61° 27' 58"E
Curve (3)
BC N 10,165,145.06 E 3,101,141.34 31+90.92
CTR N 10,164,089.90 E 3,099,200.69
PI N 10,165,461.65 E 3,100,969.20

Direction Back N28° 32' 02"W
Radius 2,208.95'
Delta 18°31'51"(LT)
Length 714.43'
Tangent 360.36'
Chord Direction N37° 47' 57"W Distance 711.32'
Direction Ahead N47° 03' 53"W

EC N 10,165,707.12 E 3,100,705.37 39+05.35
Curve (3)

Reversing Curve

Non-Tangent Radial Bearing S38° 38' 10"W
Curve (4)
BC N 10,165,707.12 E 3,100,705.37 39+05.35
CTR N 10,169,660.46 E 3,103,865.37
PI N 10,165,911.56 E 3,100,449.61

Direction Back N51° 21' 50"W
Radius 5,061.08'
Delta 7°24'12"(RT)
Length 653.95'
Tangent 327.43'
Chord Direction N47° 39' 44"W Distance 653.49'
Direction Ahead N43° 57' 38"W

EC N 10,166,147.25 E 3,100,222.32 45+59.30
Curve (4)

N 10,166,147.25 E 3,100,222.32 45+59.30
End W PARMER LN

****
Alignment Length: 3,559.30'
****

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271 | LAND SURVEYING FIRM NO. 10065700
9000 N. MOPAC EXPRESSWAY, SUITE 825
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

HORIZONTAL ALIGNMENT DATA

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
RD-100

VERTICAL CURVE DATA

Client: City of Cedar Park
Prepared by: Cobbfendley:
Date: 09/04/2024 10:22:36 PM

Vertical Alignment: TORO-GRANDE-NORTH-PGL
Description:
Station Range: Start: 27+34.49, End: 49+46.82

Vertical Curve Information:(sag curve)
PVC Station: 27+58.90 Elevation: 811.48'
PVI Station: 29+00.00 Elevation: 809.45'
PVT Station: 30+41.10 Elevation: 811.40'
Low Point: 29+02.88 Elevation: 810.45'
Grade in: -1.44% Grade out: 1.38%
Change: 2.82% K: 100.00'
Curve Length: 282.20' Curve Radius 10,000.00'
Headlight Distance: 555.67'

Vertical Curve Information:(sag curve)
PVC Station: 32+88.14 Elevation: 814.82'
PVI Station: 33+50.00 Elevation: 815.67'
PVT Station: 34+11.86 Elevation: 816.96'
Low Point: 32+88.14 Elevation: 814.82'
Grade in: 1.38% Grade out: 2.08%
Change: 0.70% K: 176.28'
Curve Length: 123.71' Curve Radius 17,628.31'
Headlight Distance:

Vertical Curve Information:(sag curve)
PVC Station: 35+00.00 Elevation: 818.80'
PVI Station: 41+00.00 Elevation: 831.30'
PVT Station: 42+00.00 Elevation: 838.02'
Low Point: 35+00.00 Elevation: 818.80'
Grade in: 2.08% Grade out: 6.72%
Change: 4.64% K:
Curve Length: 700.00' Curve Radius
Headlight Distance:

Vertical Curve Information:(crest curve)
PVC Station: 43+54.91 Elevation: 848.43'
PVI Station: 44+98.56 Elevation: 858.08'
PVT Station: 46+42.21 Elevation: 859.48'
High Point: 46+42.21 Elevation: 859.48'
Grade in: 6.72% Grade out: 0.97%
Change: 5.75% K: 50.00'
Curve Length: 287.29' Curve Radius 5,000.00'
Passing Distance: 412.77' Stopping Distance: 257.79'

Vertical Curve Information:(sag curve)
PVC Station: 46+76.60 Elevation: 859.81'
PVI Station: 47+61.58 Elevation: 860.64'
PVT Station: 48+46.56 Elevation: 864.36'
Low Point: 46+76.60 Elevation: 859.81'
Grade in: 0.97% Grade out: 4.37%
Change: 3.40% K: 50.00'
Curve Length: 169.97' Curve Radius 5,000.00'
Headlight Distance: 295.60'

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271 | LAND SURVEYING FIRM NO. 10045700
9000 N. MOPAC EXPRESSWAY, SUITE 825
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

VERTICAL CURVE DATA

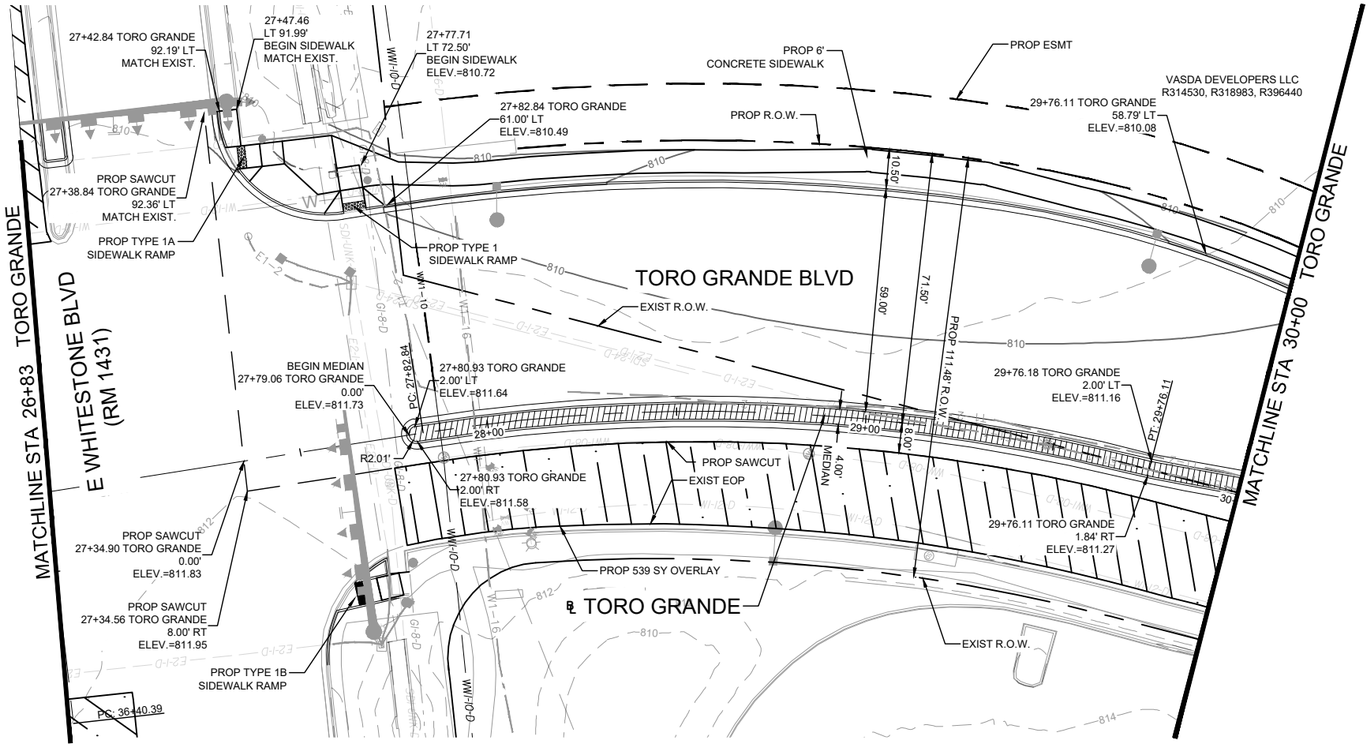
TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

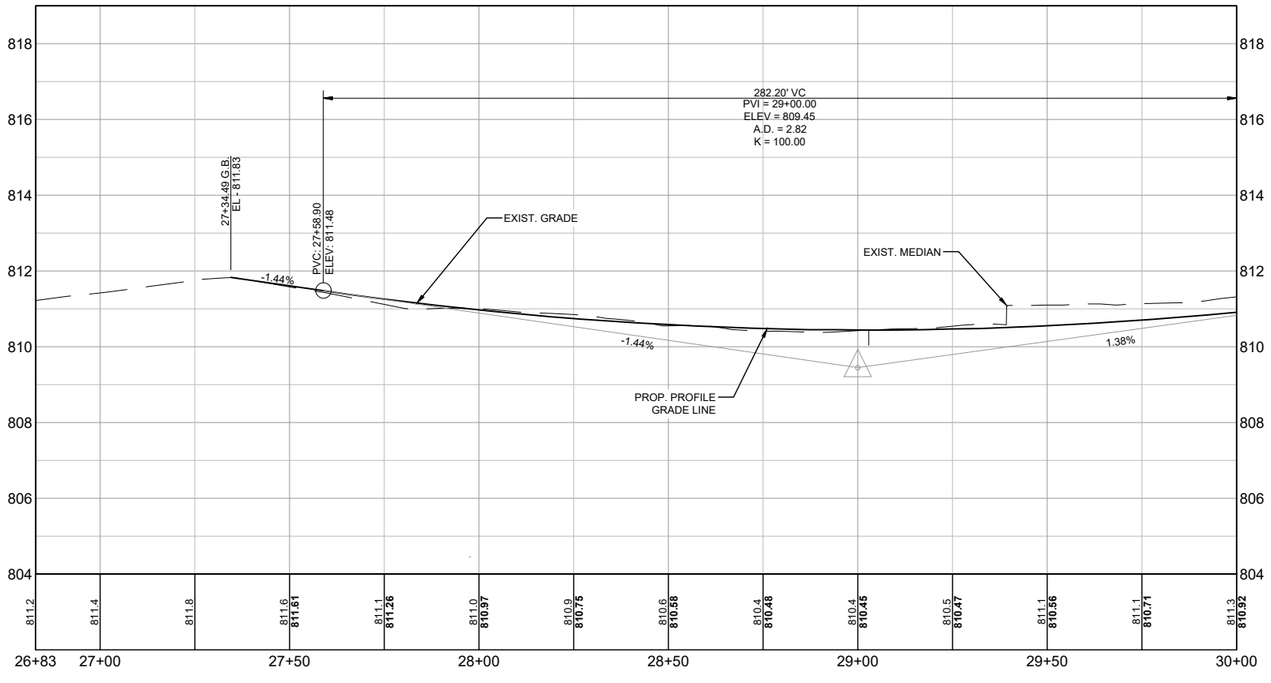
CEDAR PARK

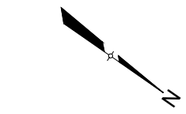
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
RD-101







0 20' 40'

SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- EX. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
- EX. WIRE FENCE
- EX. GUARD RAIL
- PR. GUARD RAIL
- EROSION HAZARD REVIEW BUFFER ZONE
- HIGH WATER MARKS
- PR. CONC. DRIVEWAY
- PR. TRAIL
- 100 YR FLOOD PLAIN
- 500 YR FLOOD PLAIN
- PR. MEDIAN STAMPING
- PR. OVERLAY

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
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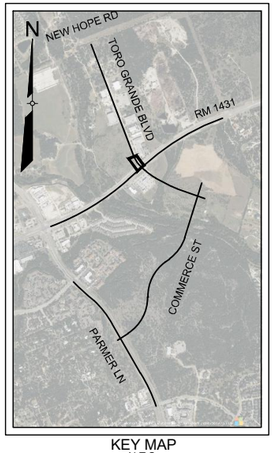
4. DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
5. SEE STORM SHEETS FOR ALL PROPOSED DRAINAGE INFRASTRUCTURE.
6. MEDIANS SHALL BE STAMPED CONCRETE PER DETAIL X WITH 15' X 15' BLOCKOUTS FOR TREE WELLS AT APPROXIMATELY 75' ON CENTER. EXISTING TREES IN PROPOSED MEDIAN TO BE SALVAGED AS FEASIBLE. COORDINATE WITH CITY DURING CONSTRUCTION
7. CONTRACTOR SHALL NOT INITIATE CLEARING OF VEGETATION ON COMMERCE STREET FROM STA 42+00 TO STA 10+00 FROM MARCH 1 THROUGH AUGUST 1 OF ANY YEAR.
8. TEMPORARY CROSSING LIMITED TO LIMITS SHOWN. NO PERMANENT IMPACTS TO WATER OF THE US ALLOWED. SEE ESC SHEETS 100 - 118 FOR FULL LIMITS OF CONSTRUCTION



KEY MAP
N.T.S.

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

602.7 EXISTING GRADE
597.71 PROFILE GRADE LINE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10048700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH
PLAN AND PROFILE STA
26+83 TO 30+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

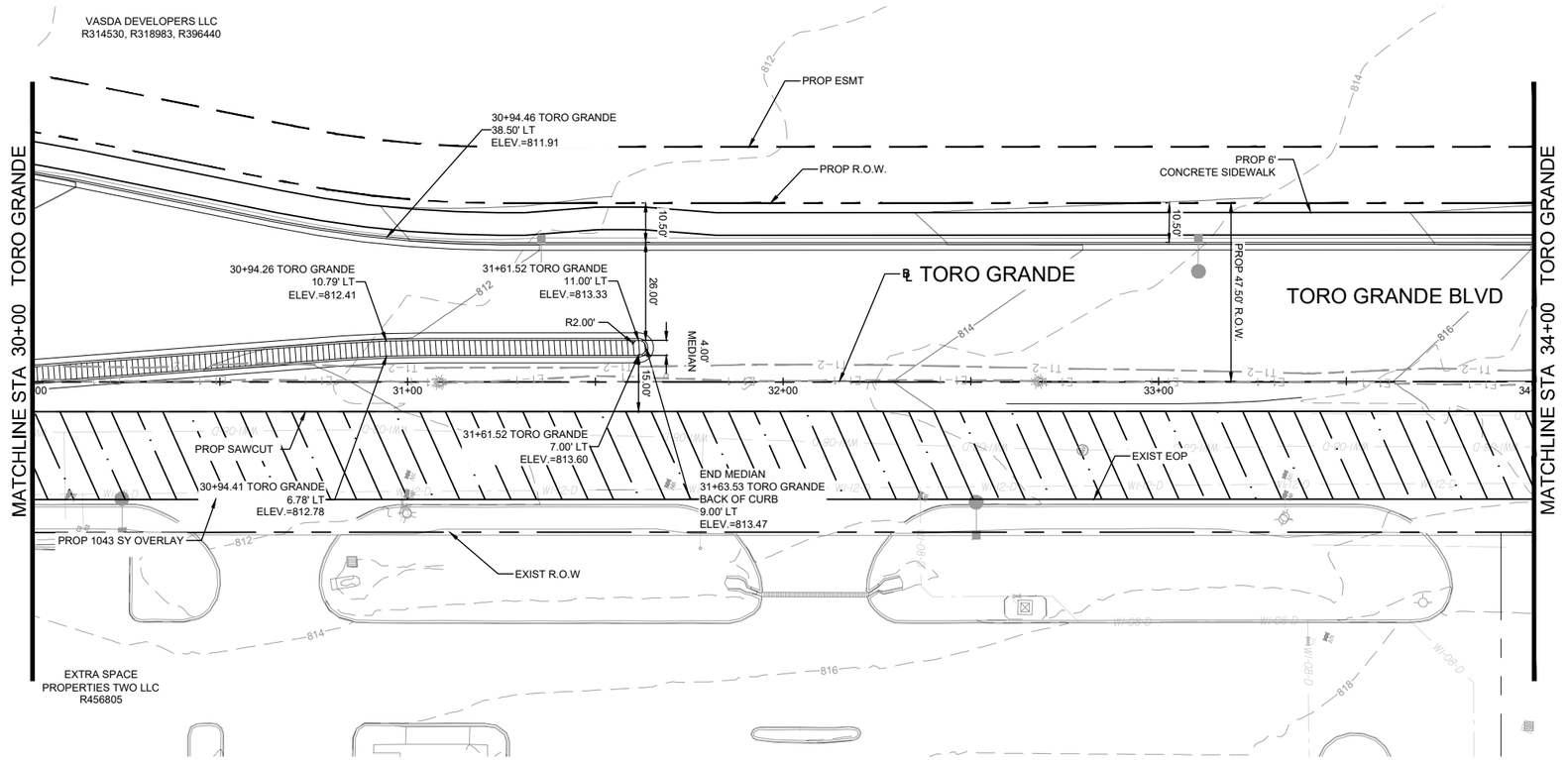
CEDAR PARK

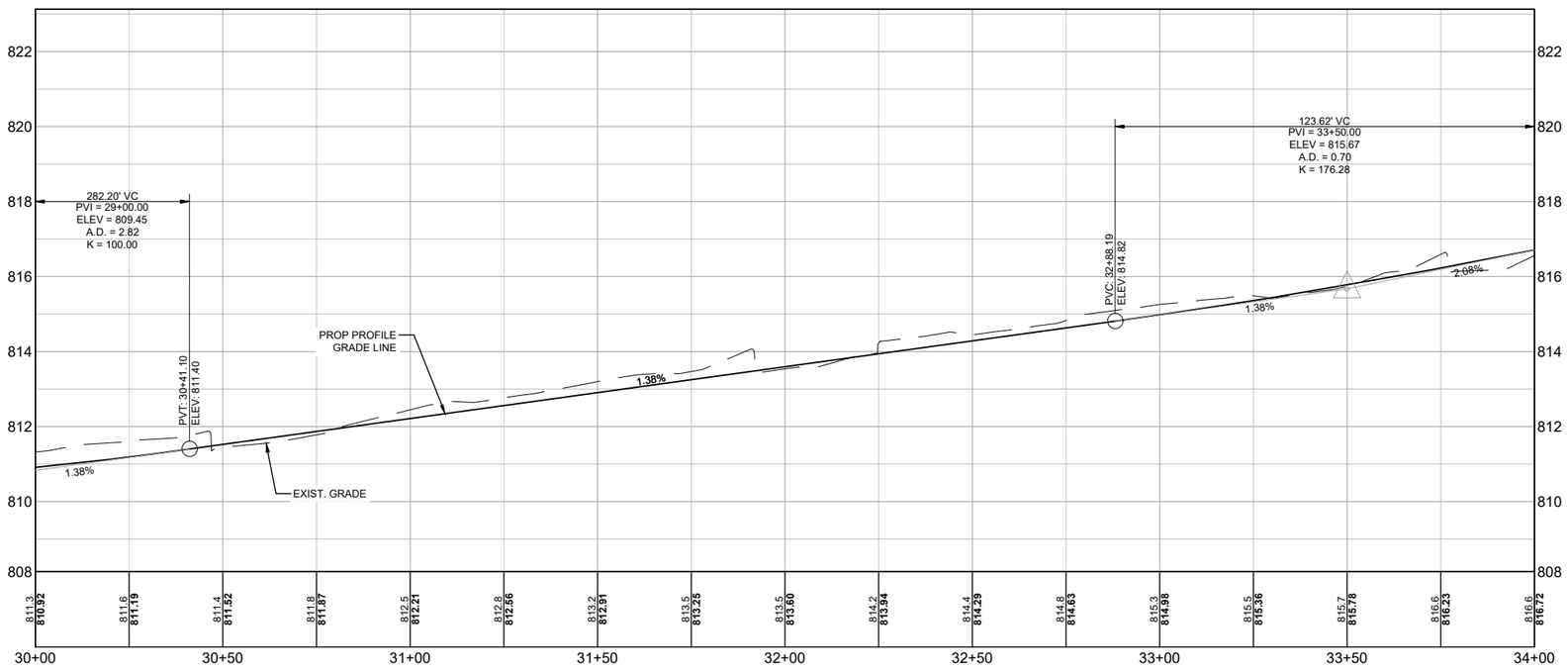
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
Julie Hastings
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
RD-200





EXISTING GRADE 602.7
PROFILE GRADE LINE 597.71

PROFILE SCALE
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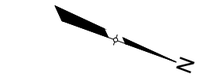
1" = 4' VERT.



0 20' 40'
SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
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- ABAND. WASTEWATER
- EX. WASTEWATER
- ABAND. STORM DRAIN
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- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
- EX. WIRE FENCE
- EX. GUARD RAIL
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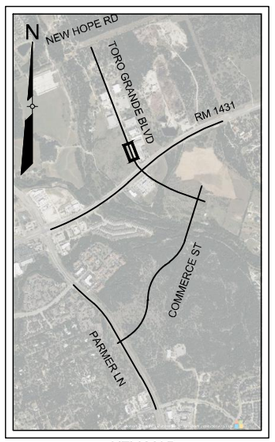


KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10046700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759 | 512.834.9789
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH PLAN AND PROFILE STA 30+00 TO 34+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

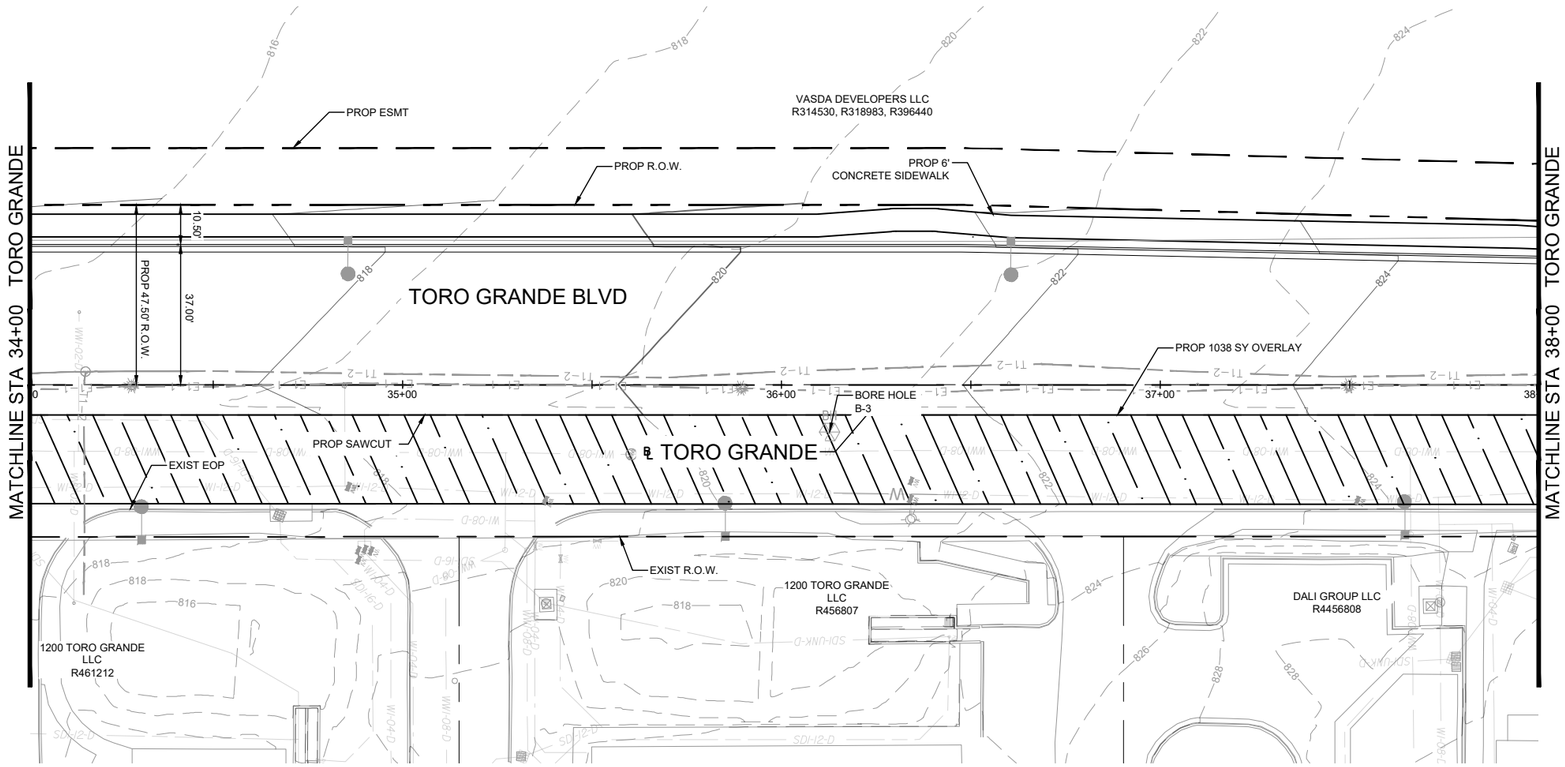
CEDAR PARK

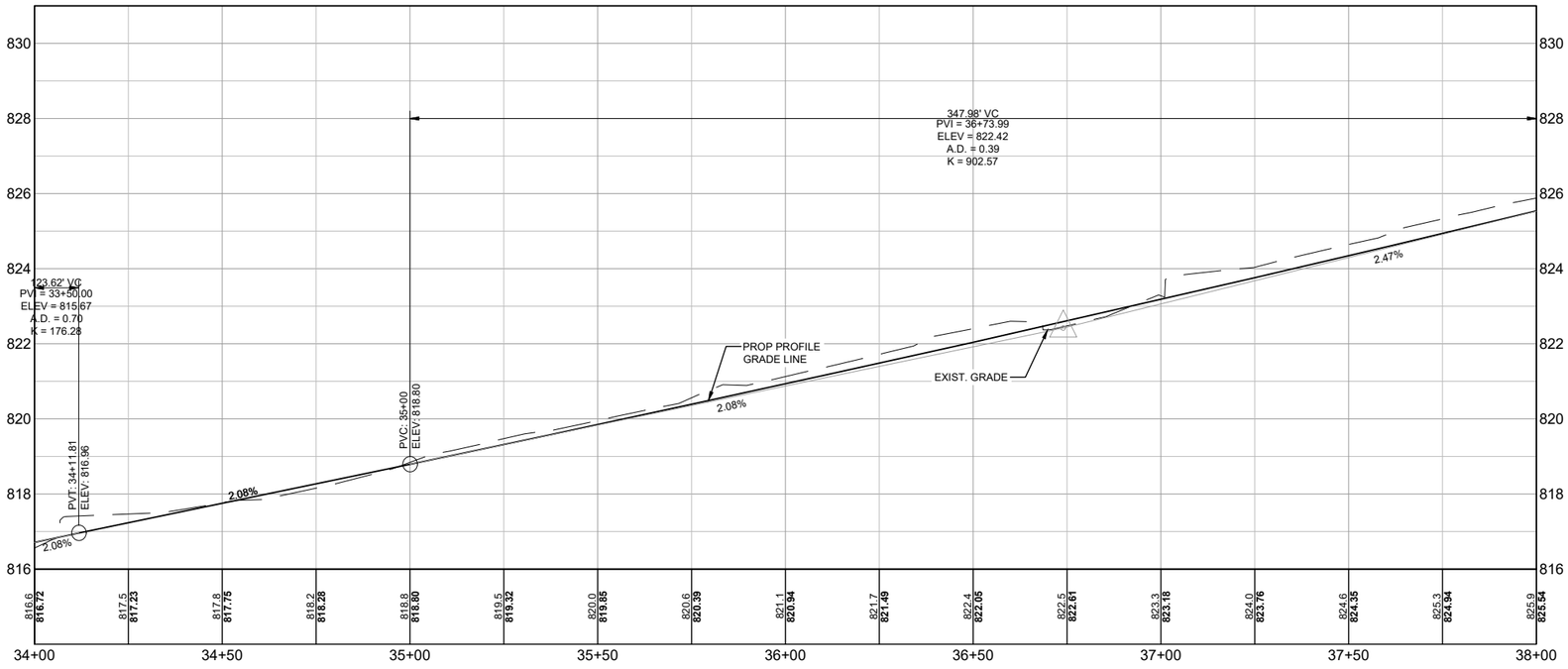
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

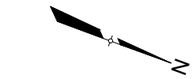
STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
RD-201







0 20' 40'

SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- EX. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
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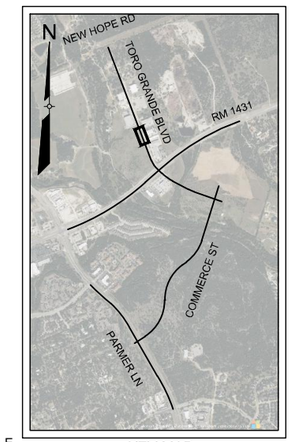
8. TEMPORARY CROSSING LIMITED TO LIMITS SHOWN. NO PERMANENT IMPACTS TO WATER OF THE US ALLOWED. SEE ESC SHEETS 100 - 118 FOR FULL LIMITS OF CONSTRUCTION



KEY MAP
N.T.S.

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

602.7 EXISTING GRADE
597.71 PROFILE GRADE LINE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10046700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759-8313
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH PLAN AND PROFILE STA 34+00 TO 38+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

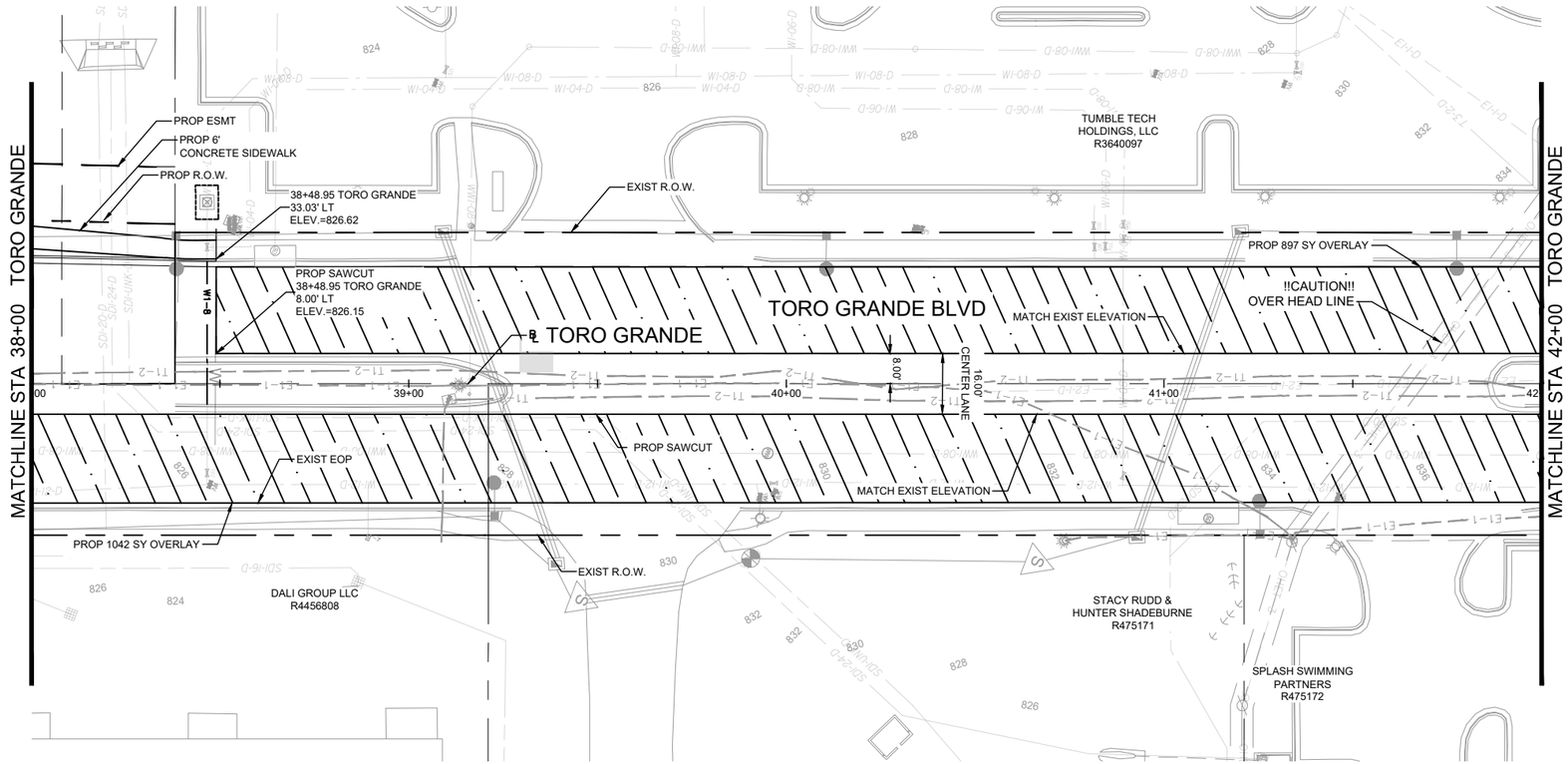
CEDAR PARK

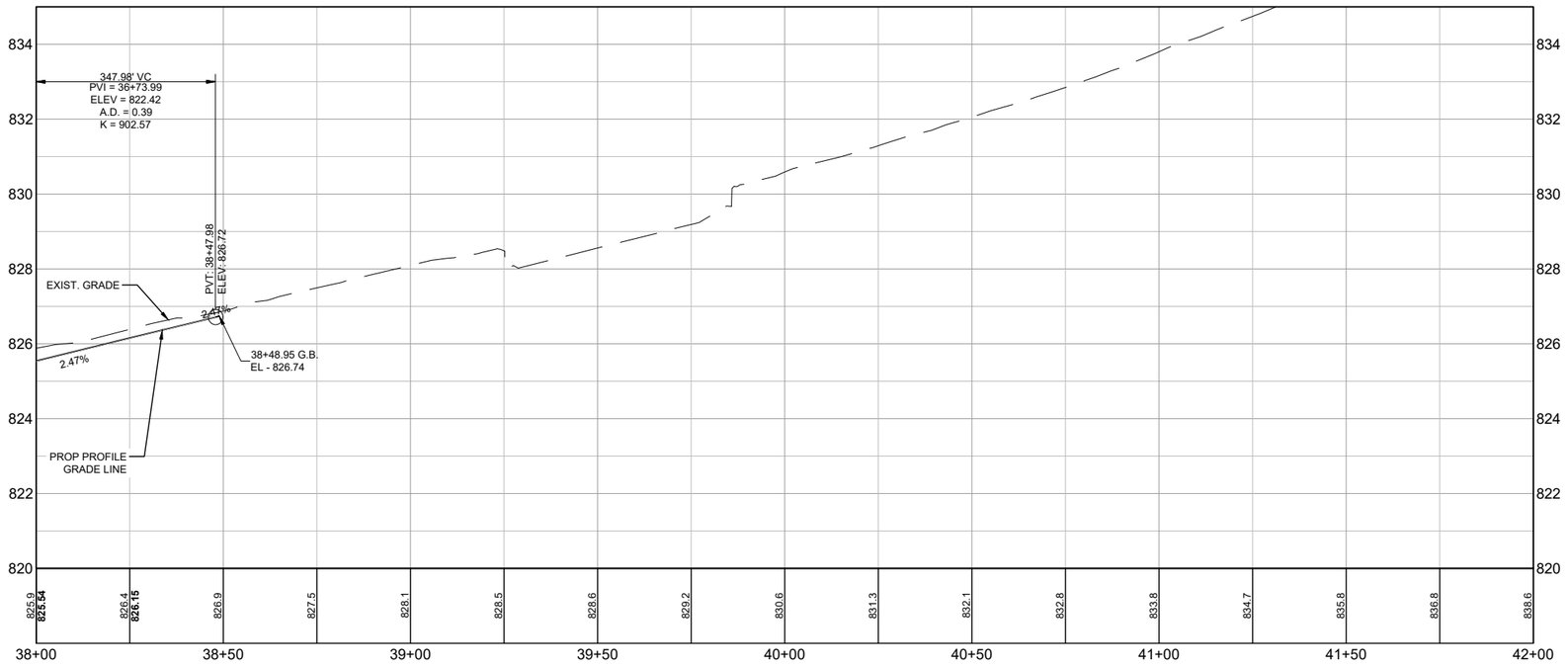
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

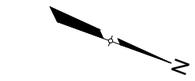
STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
RD-202







0 20' 40'

SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
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- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
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- EX. GUARD RAIL
- PR. GUARD RAIL
- EROSION HAZARD REVIEW BUFFER ZONE
- HIGH WATER MARKS
- PR. CONC. DRIVEWAY
- PR. TRAIL
- 100 YR FLOOD PLAIN
- 500 YR FLOOD PLAIN
- PR. MEDIAN STAMPING
- PR. OVERLAY

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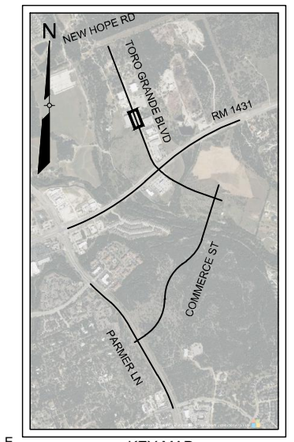
5. SEE STORM SHEETS FOR ALL PROPOSED DRAINAGE INFRASTRUCTURE.
6. MEDIANS SHALL BE STAMPED CONCRETE PER DETAIL X WITH 15' X 15' BLOCKOUTS FOR TREE WELLS AT APPROXIMATELY 75' ON CENTER. EXISTING TREES IN PROPOSED MEDIAN TO BE SALVAGED AS FEASIBLE. COORDINATE WITH CITY DURING CONSTRUCTION
7. CONTRACTOR SHALL NOT INITIATE CLEARING OF VEGETATION ON COMMERCE STREET FROM STA 42+00 TO STA 10+00 FROM MARCH 1 THROUGH AUGUST 1 OF ANY YEAR.
8. TEMPORARY CROSSING LIMITED TO LIMITS SHOWN. NO PERMANENT IMPACTS TO WATER OF THE US ALLOWED. SEE ESC SHEETS 100 - 118 FOR FULL LIMITS OF CONSTRUCTION



KEY MAP
N.T.S.

EXISTING GRADE 602.7
PROFILE GRADE LINE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10046700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH
PLAN AND PROFILE STA
38+00 TO 42+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

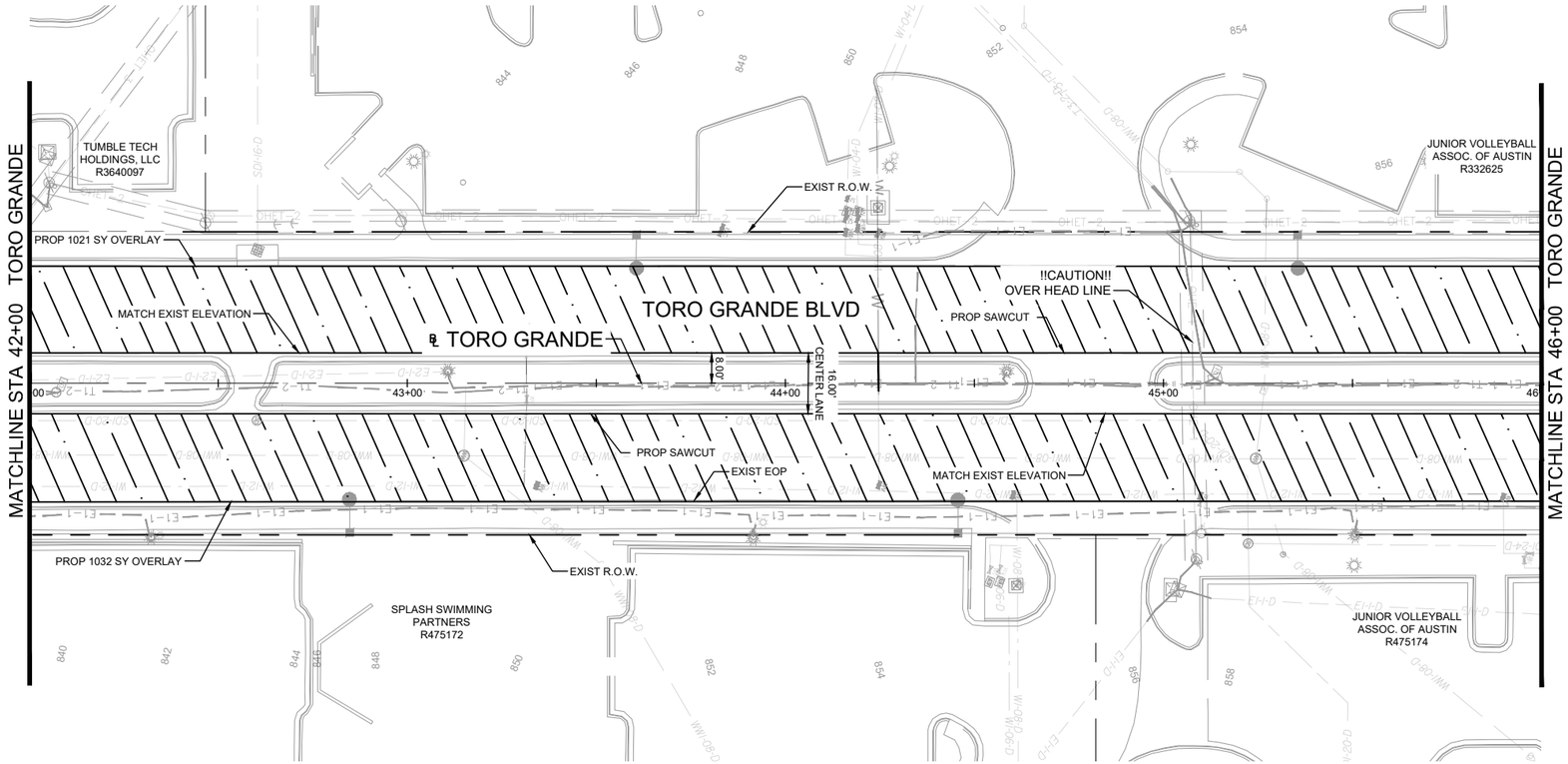
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
RD-203

Dwg. Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-1000 PLAN AND PROFILE.dwg – Tab: TORO GRANDE NORTH PLAN AND PROFILE STA 38+00 TO 42+00 – Plotted: 2/27/2025 12:33 PM By: JAVIER HOLGUIN



0 20' 40'

SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- EX. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
- EX. WIRE FENCE
- EX. GUARD RAIL
- PR. GUARD RAIL
- EROSION HAZARD REVIEW BUFFER ZONE
- HIGH WATER MARKS
- PR. CONC. DRIVEWAY
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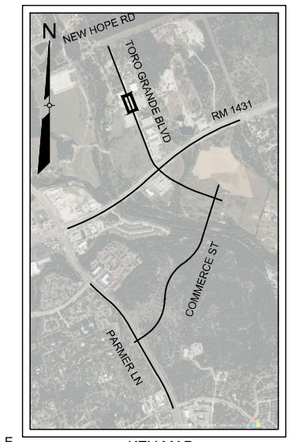


KEY MAP
N.T.S.

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

602.7 EXISTING GRADE
597.71 PROFILE GRADE LINE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10046700
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH
PLAN AND PROFILE STA
42+00 TO 46+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

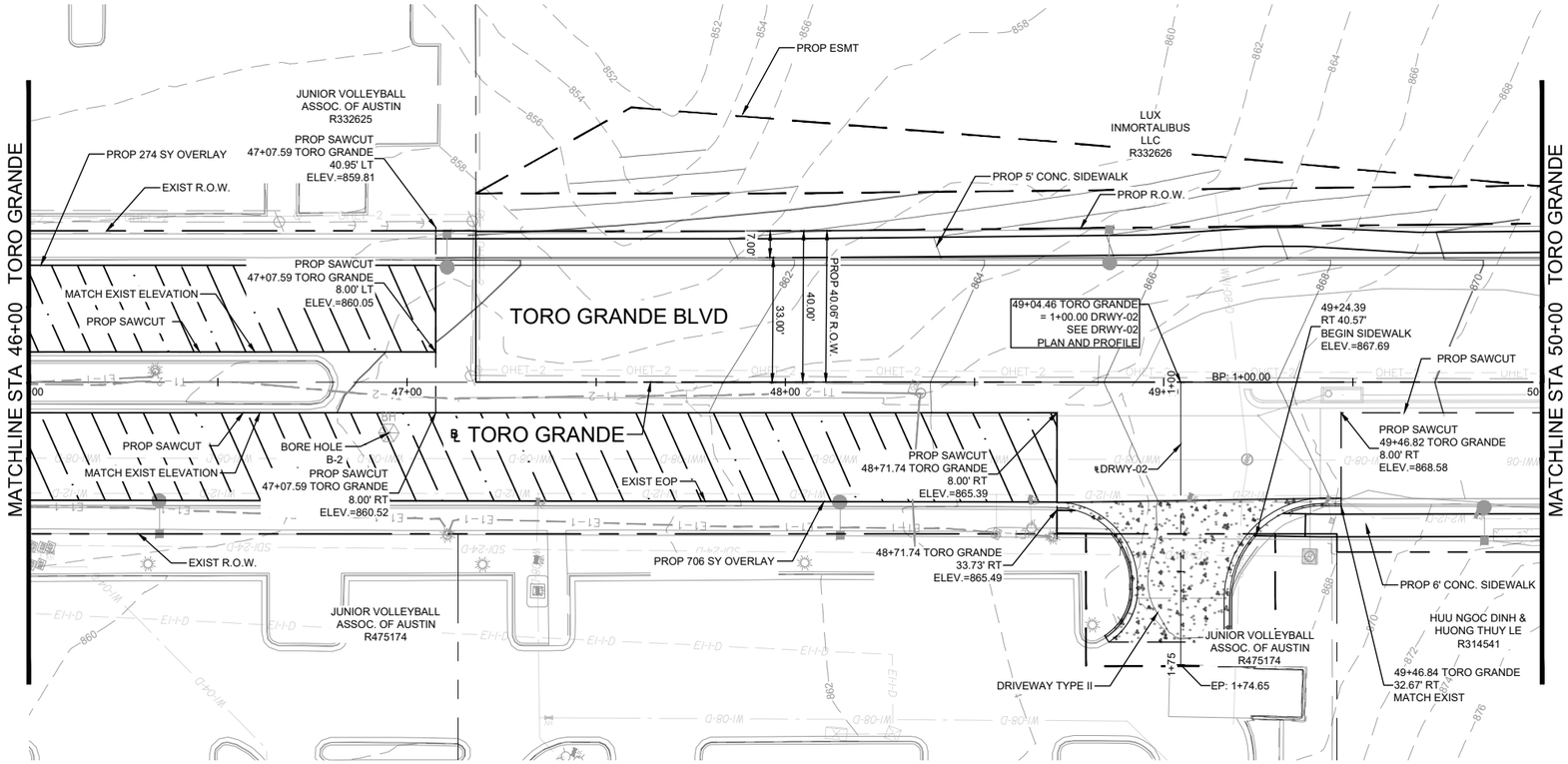
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

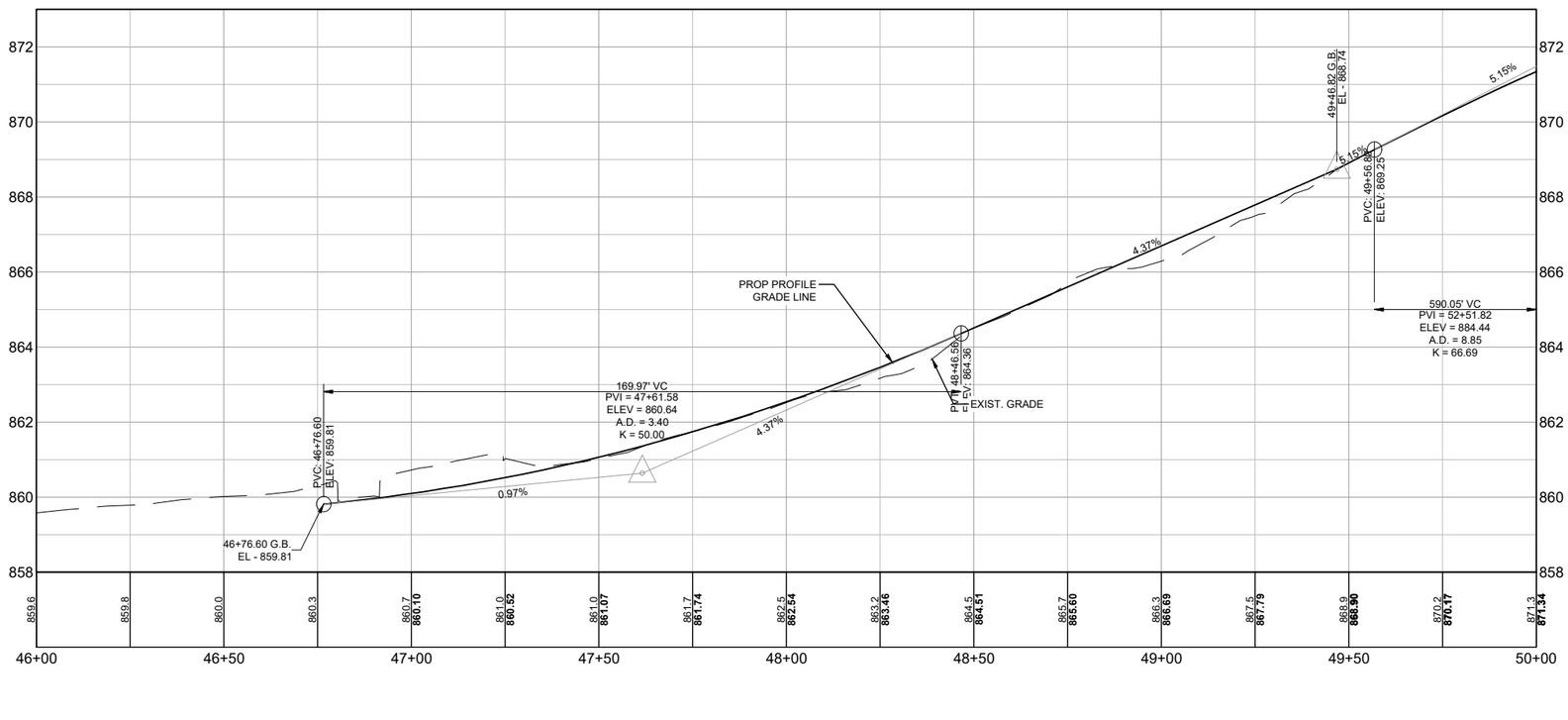
STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
RD-204

Dwg. Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-1000 PLAN AND PROFILE.dwg – Tab: TORO GRANDE NORTH PLAN AND PROFILE STA 42+00 TO 46+00 – Plotted: 2/27/2025 12:34 PM By: JAVIER HOLGUIN





0 20' 40'
SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- EX. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
- EX. WIRE FENCE
- EX. GUARD RAIL
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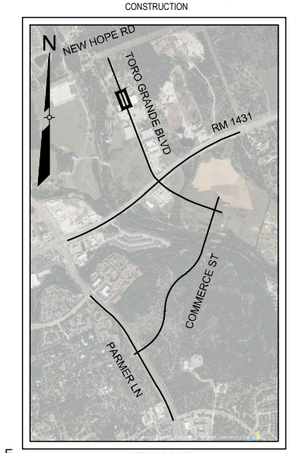

KEY MAP
N.T.S.

EXISTING GRADE 602.7
PROFILE GRADE LINE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10048700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH
PLAN AND PROFILE STA
46+00 TO 50+00
TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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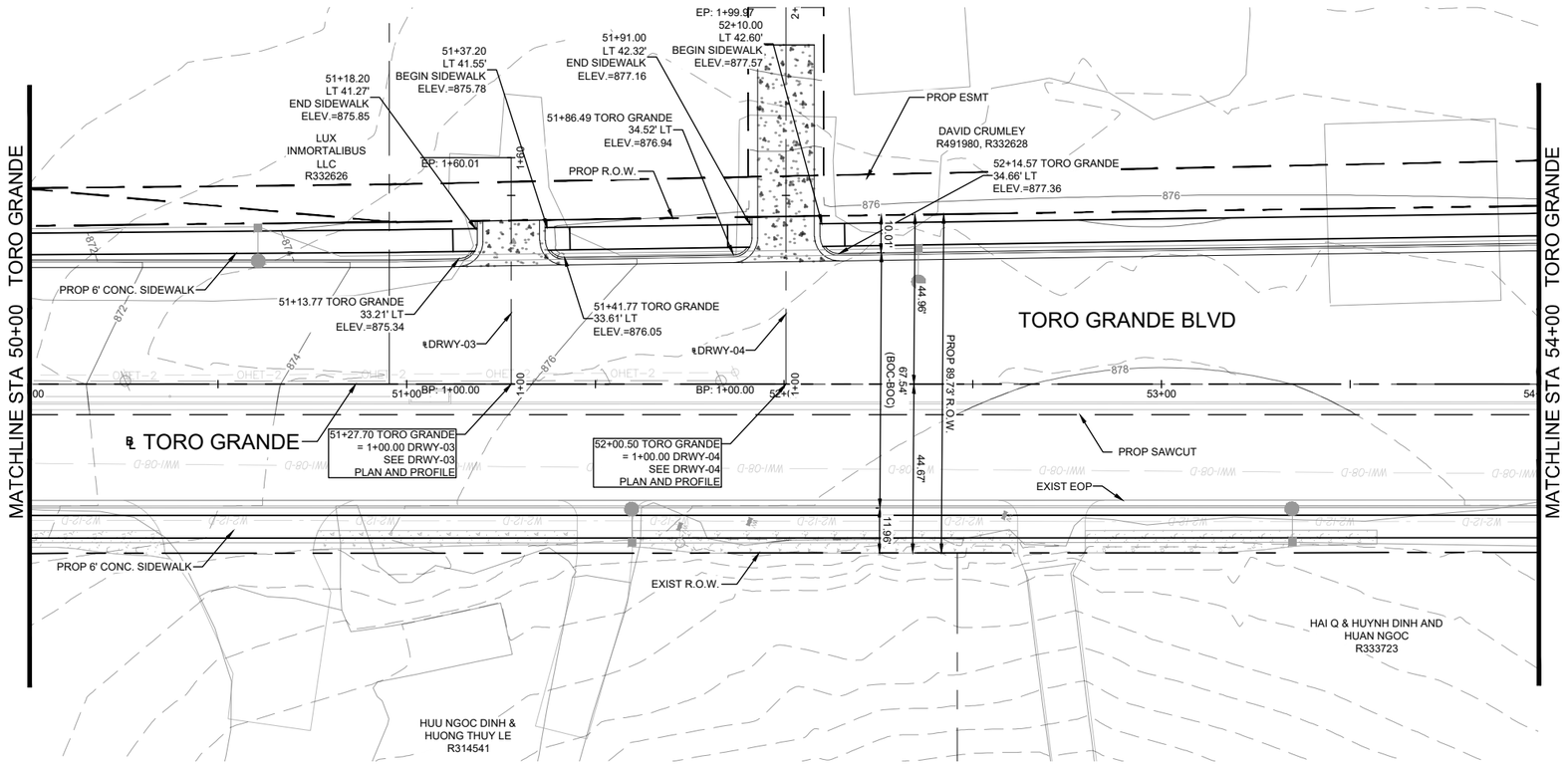
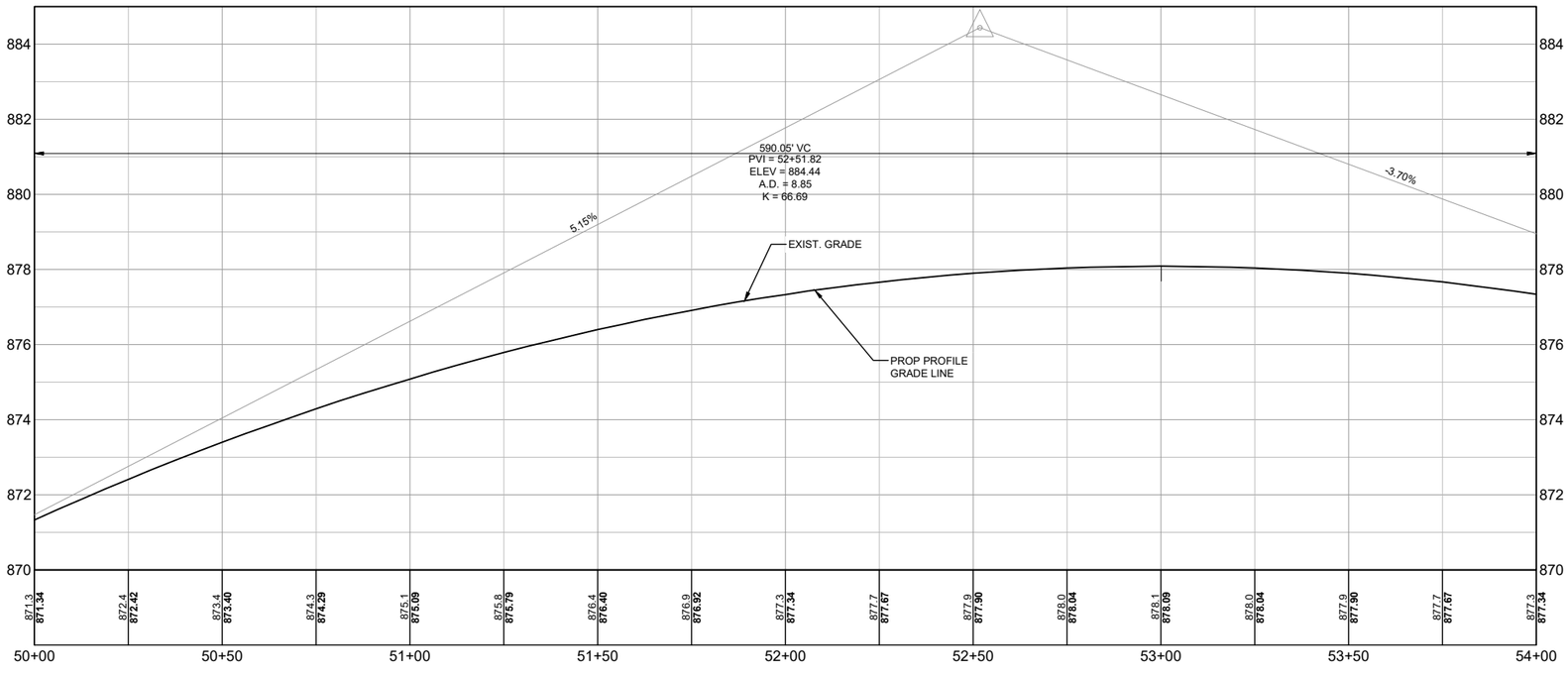
SHEET
RD-205





0 20' 40'
SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
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602.7 EXISTING GRADE
597.71 PROFILE GRADE LINE

PROFILE SCALE
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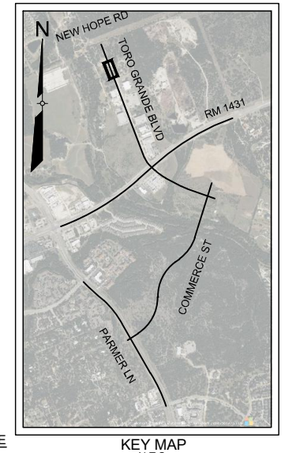
1" = 4' VERT.



KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10048700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH PLAN AND PROFILE STA 50+00 TO 54+00

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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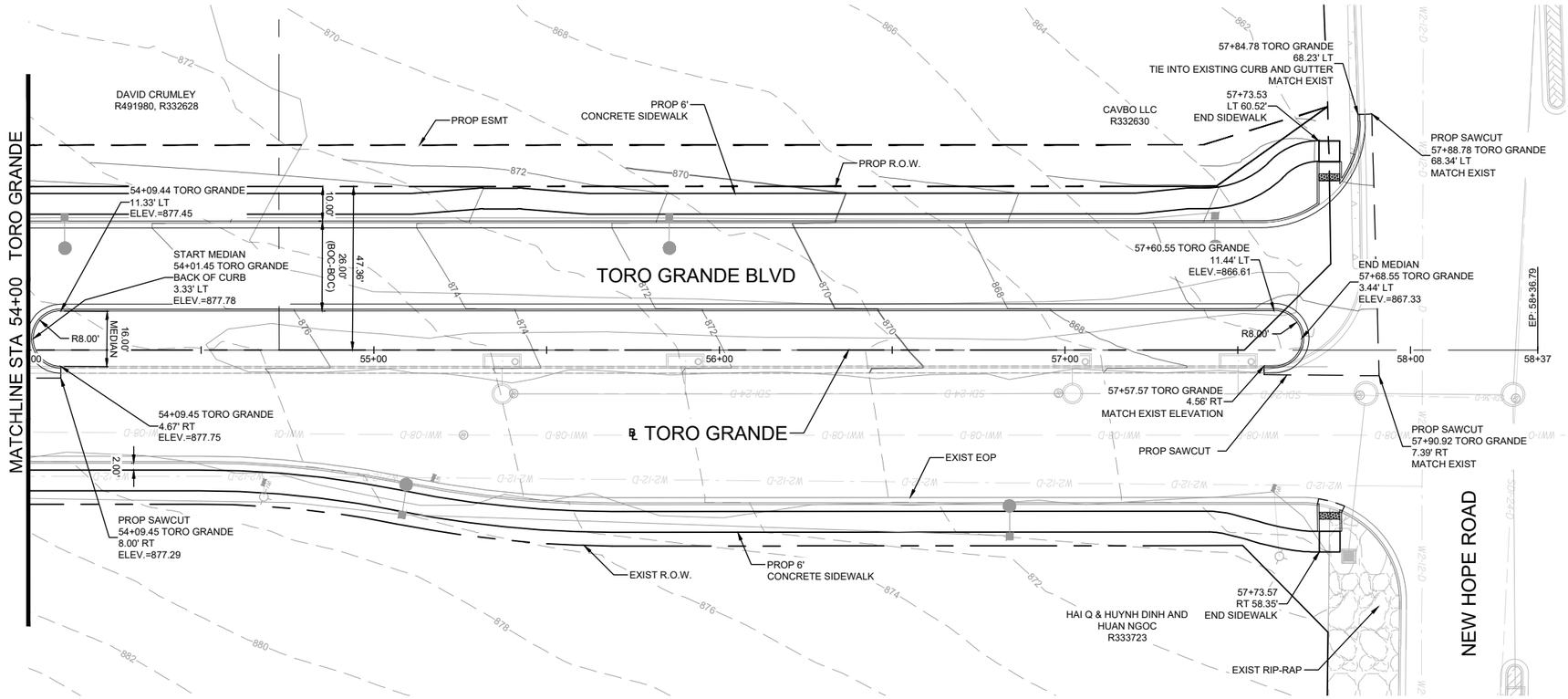
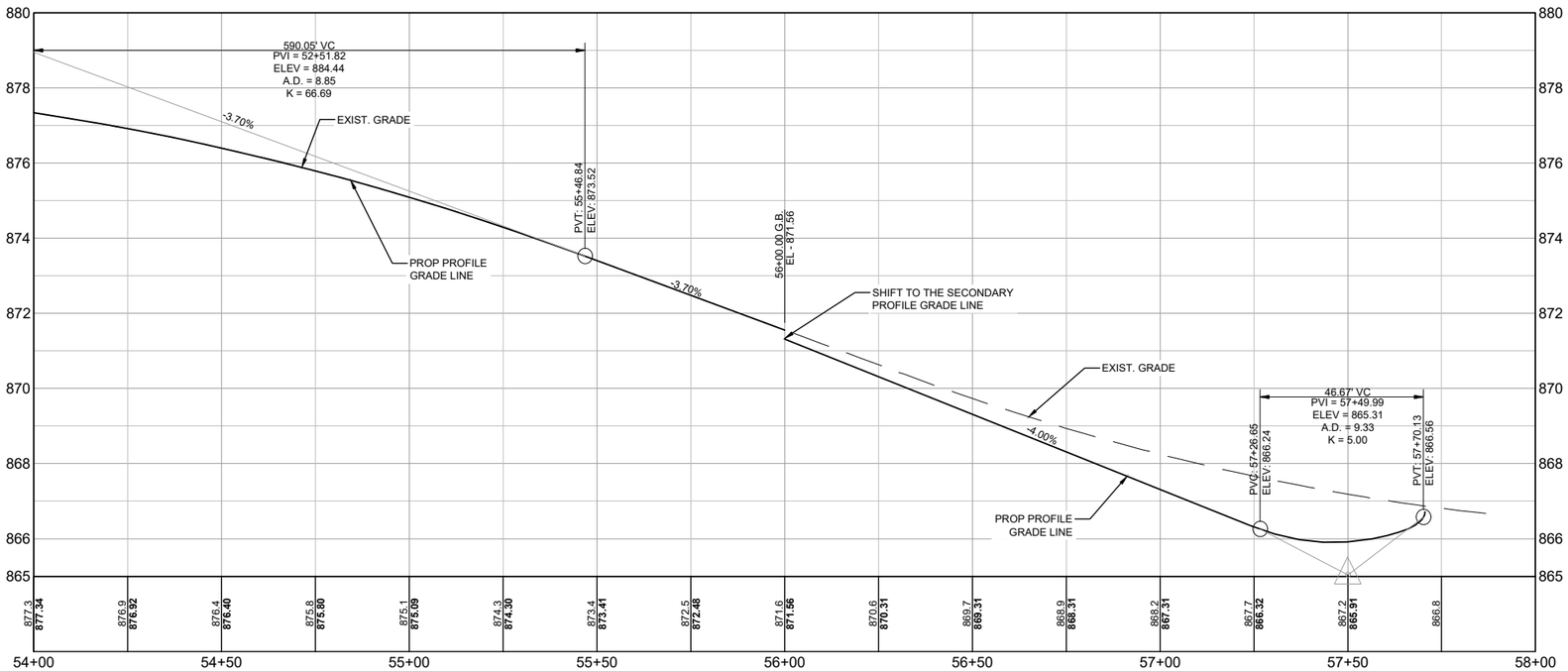
SHEET
RD-206

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-1000 PLAN AND PROFILE - 2.dwg - Tab: TORO GRANDE NORTH PLAN AND PROFILE STA 50+00 TO 54+00 - Plotted: 2/27/2025 12:36 PM
By: JAVIER HOLGUIN





SCALE: 1" = 40'

LEGEND

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- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
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- ABAND. WATER
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PROFILE GRADE LINE 597.71

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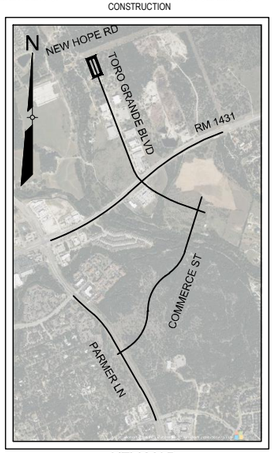


KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. - 10046700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.2195 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE NORTH PLAN AND PROFILE STA 54+00 TO ENDTORO GRAND SOUTH

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

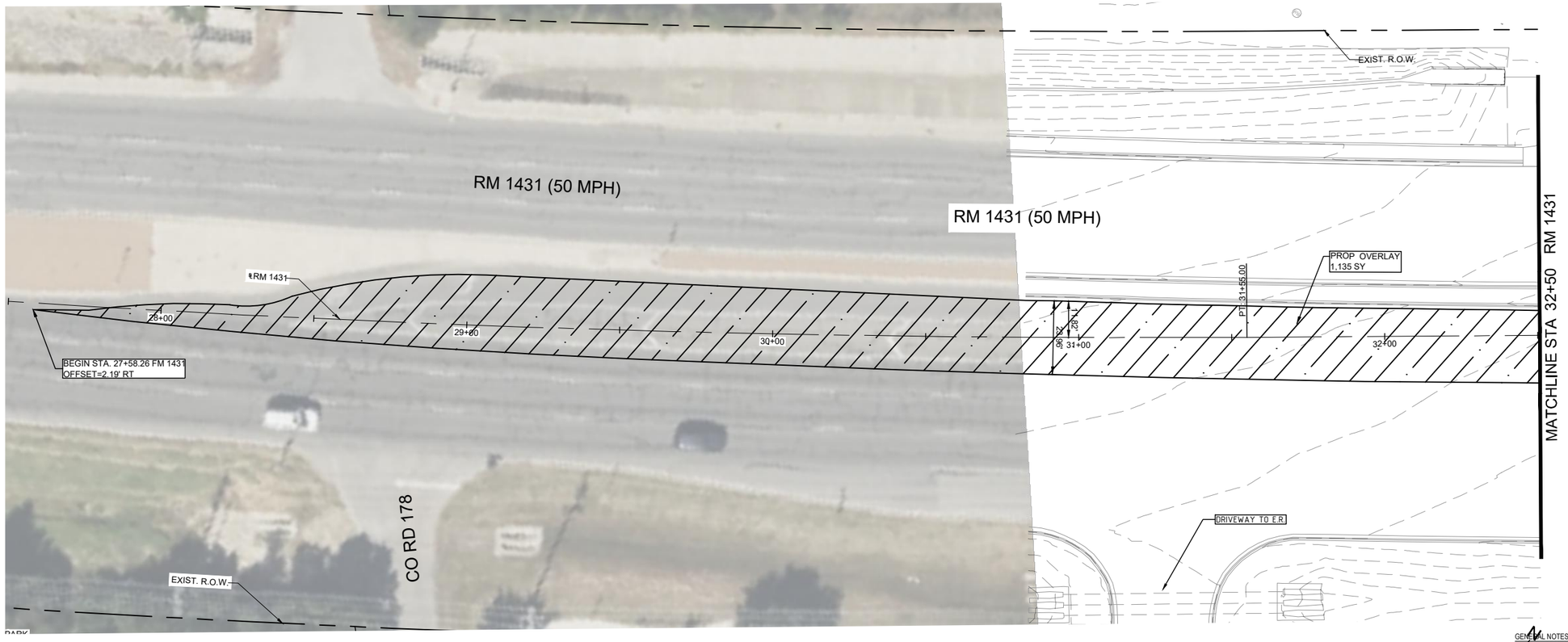
CEDAR PARK

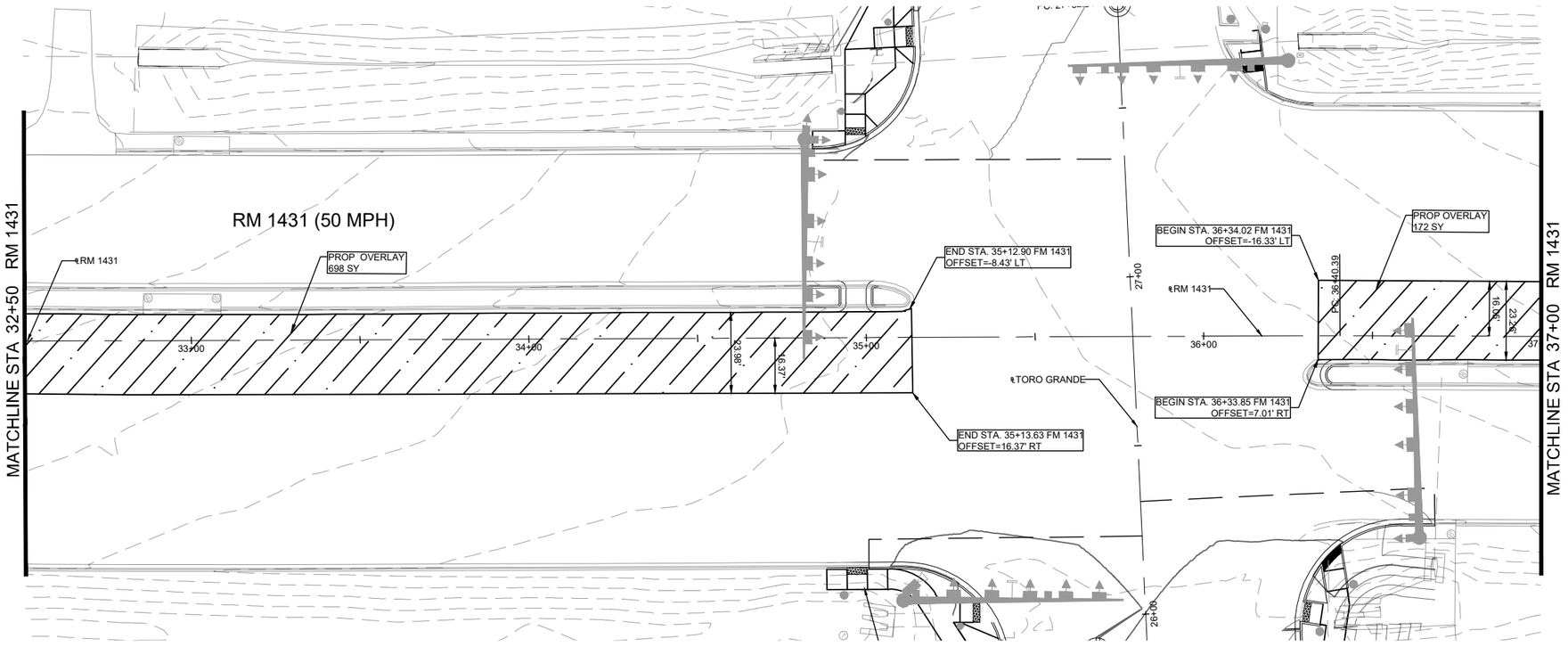
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
RD-207





0 20' 40'

SCALE: 1" = 40'

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- PR. OVERLAY

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4. DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
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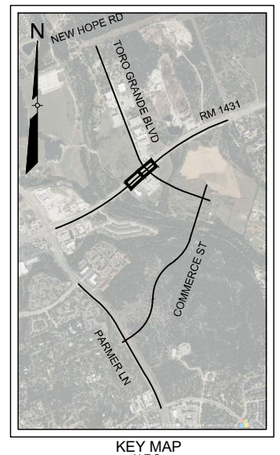


KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10067500
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

RM 1431 PLAN BEGIN TO STA 37+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

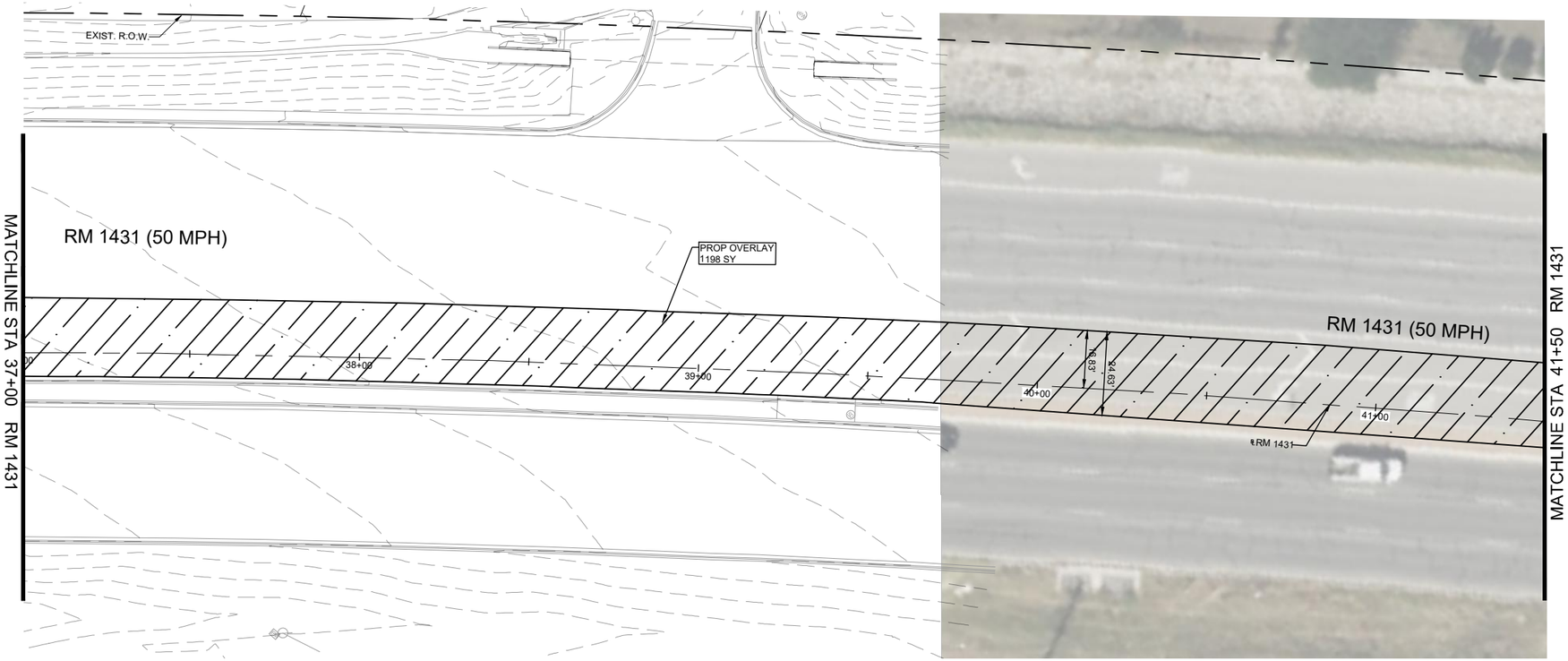
PROJ. NO. 2312-052-02/03
DESIGN: O. SAENZ
DRAWN: O. SAENZ
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

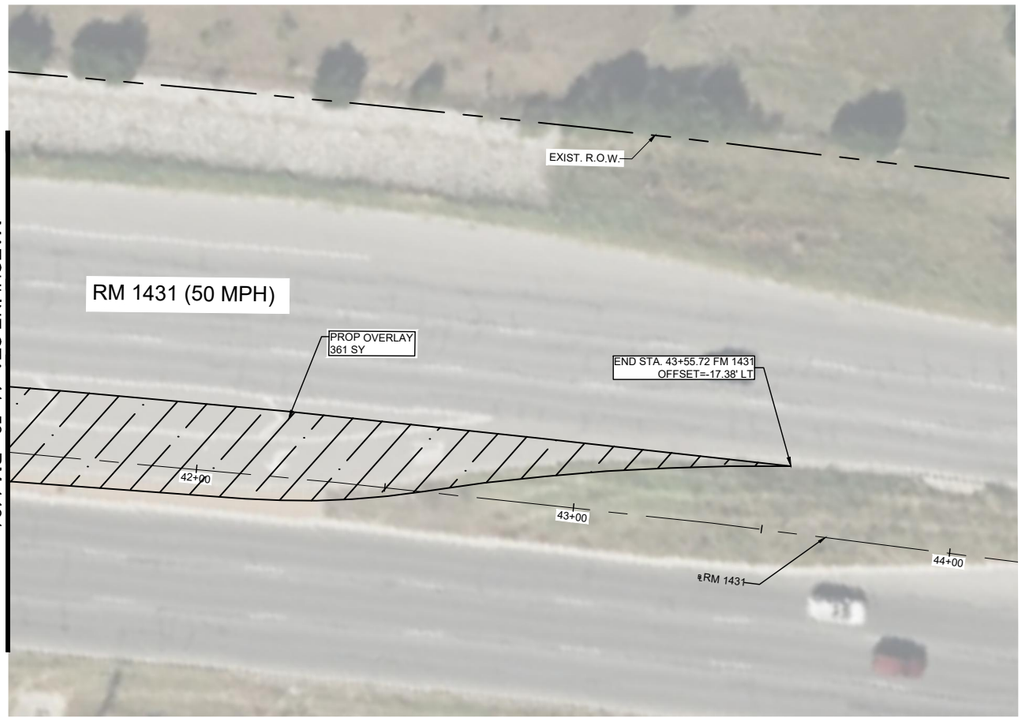
STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
RD-300

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-500 - MILL_&_OVERLAY_PLAN.dwg - Tab: PLAN 1 - Plotted: 2/27/2025 12:38 PM By: JAVIER HOLGUIN





0 20' 40'

SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- EX. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
- EX. WIRE FENCE
- EX. GUARD RAIL
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- EROSION HAZARD REVIEW BUFFER ZONE
- HIGH WATER MARKS
- PR. CONC. DRIVEWAY
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- 100 YR FLOOD PLAIN
- 500 YR FLOOD PLAIN
- PR. MEDIAN STAMPING
- PR. OVERLAY

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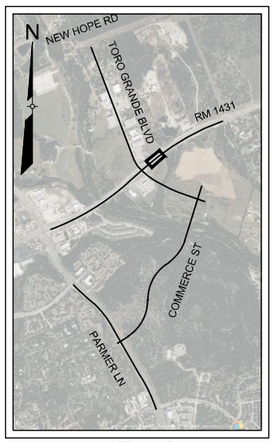

KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10067500
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

RM 1431 PLAN STA 37+00 TO END

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: O. SAENZ
DRAWN: O. SAENZ
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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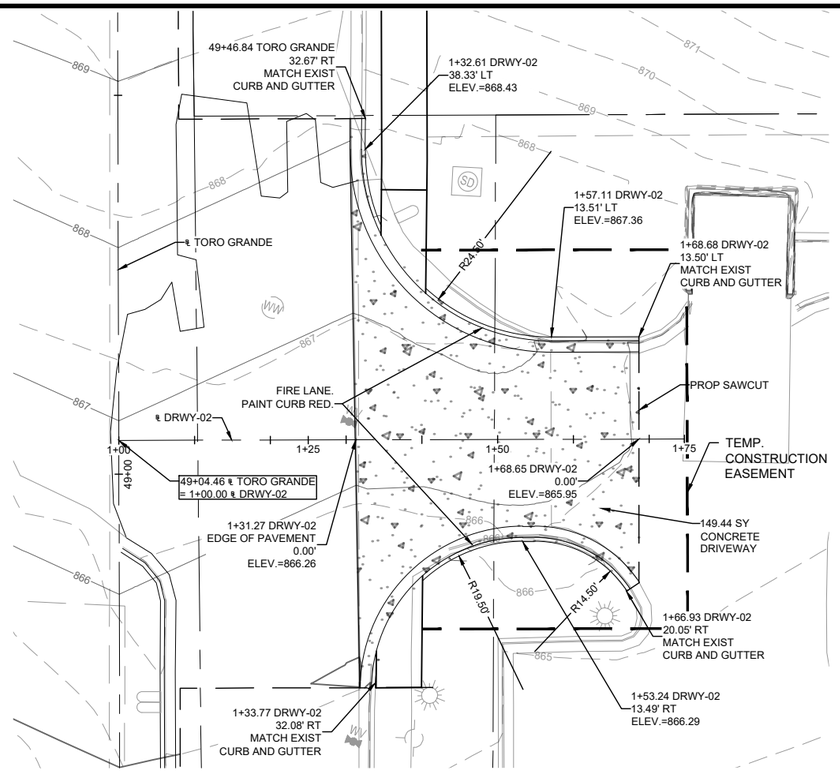
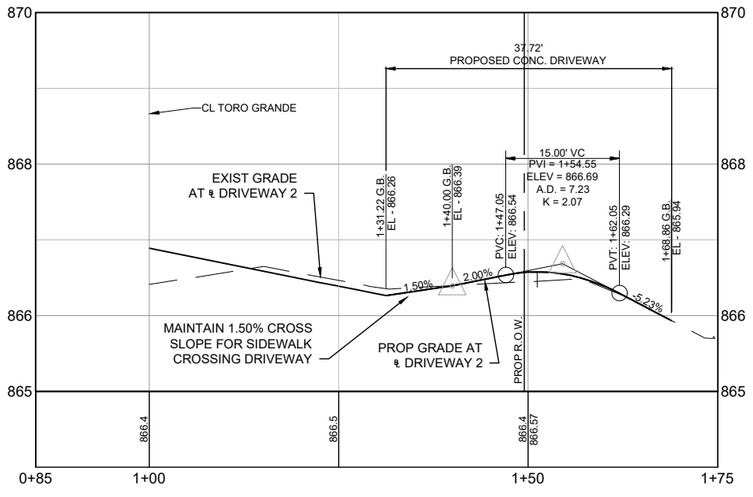
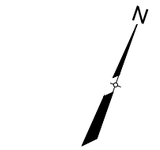
SHEET
RD-301





DRWY-02 0+85 TO 1+75

EXISTING GRADE 602.7
PROFILE GRADE LINE 597.71



0 10' 20'
SCALE: 1" = 20'

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- EXIST. ROW
- PROP. ROW
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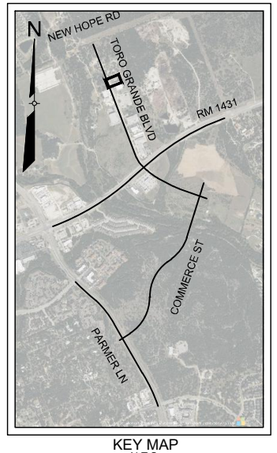
PROFILE SCALE
1"=20' HORIZ.
1" = 2' VERT.



KEY MAP
N.T.S.

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CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. - 10048700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

DRIVEWAY 02 PLAN AND PROFILES

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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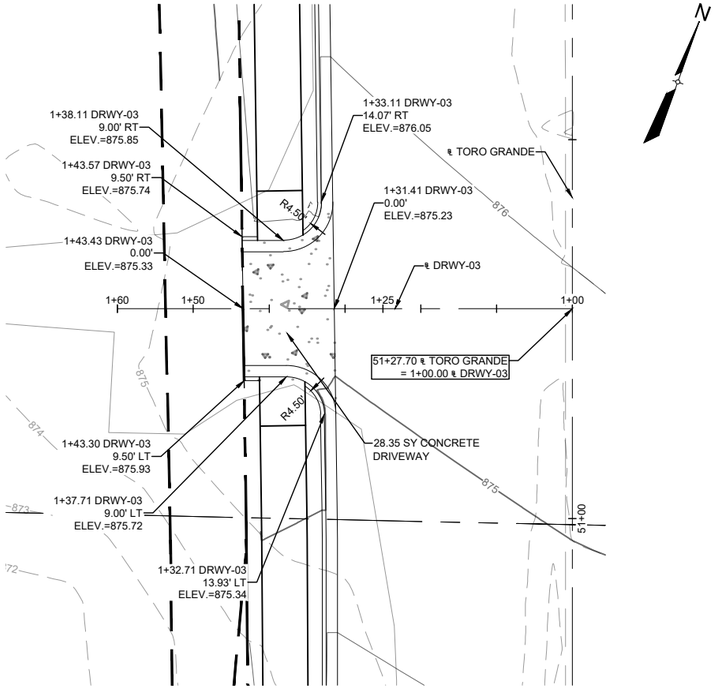
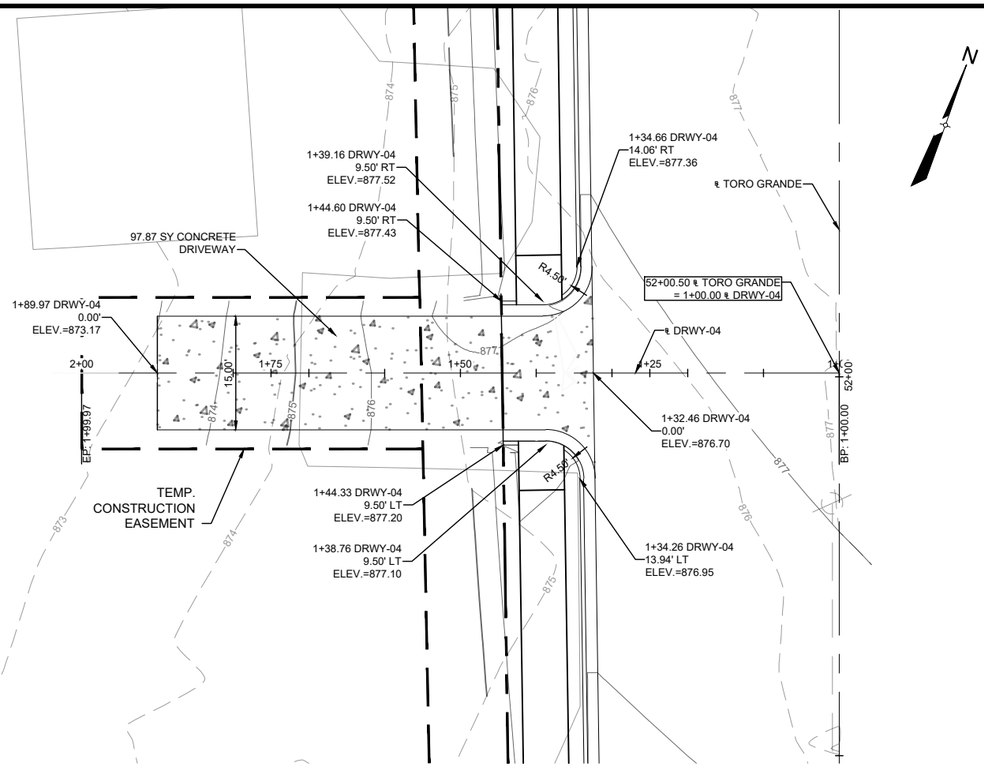
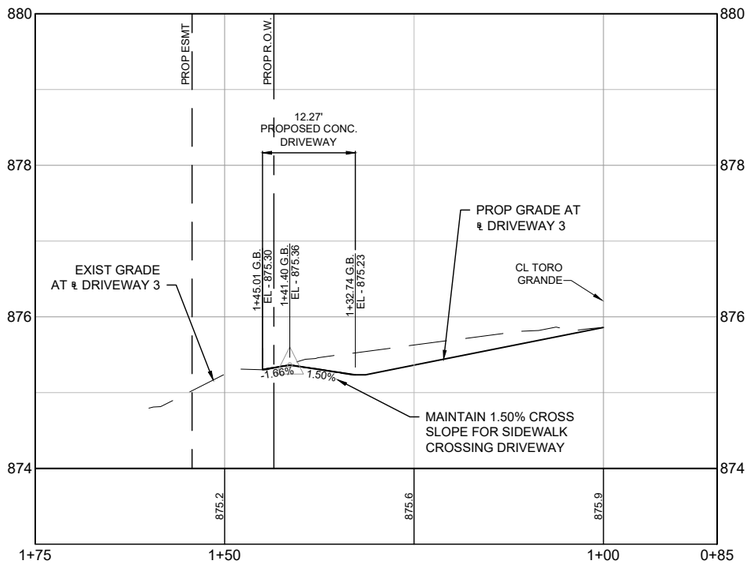
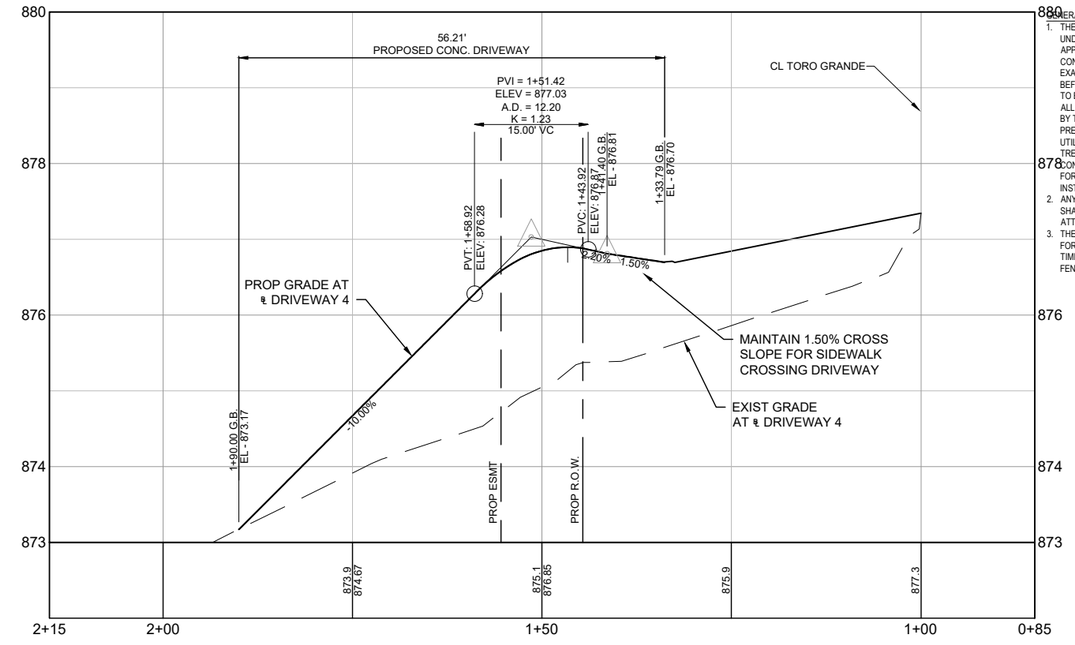
SHEET
RD-400







DRWY-03 0+85 TO 1+75



DRWY-04 0+85 TO 2+15

EXISTING GRADE 602.7
PROFILE GRADE LINE 597.71

PROFILE SCALE
1"=20' HORIZ.
1" = 2' VERT.

SCALE: 1" = 20'

LEGEND

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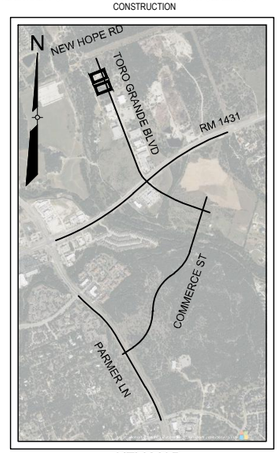

KEY MAP
N.T.S.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10048700
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759-8854
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

DRIVEWAYS 03 & 04
PLAN AND PROFILE

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
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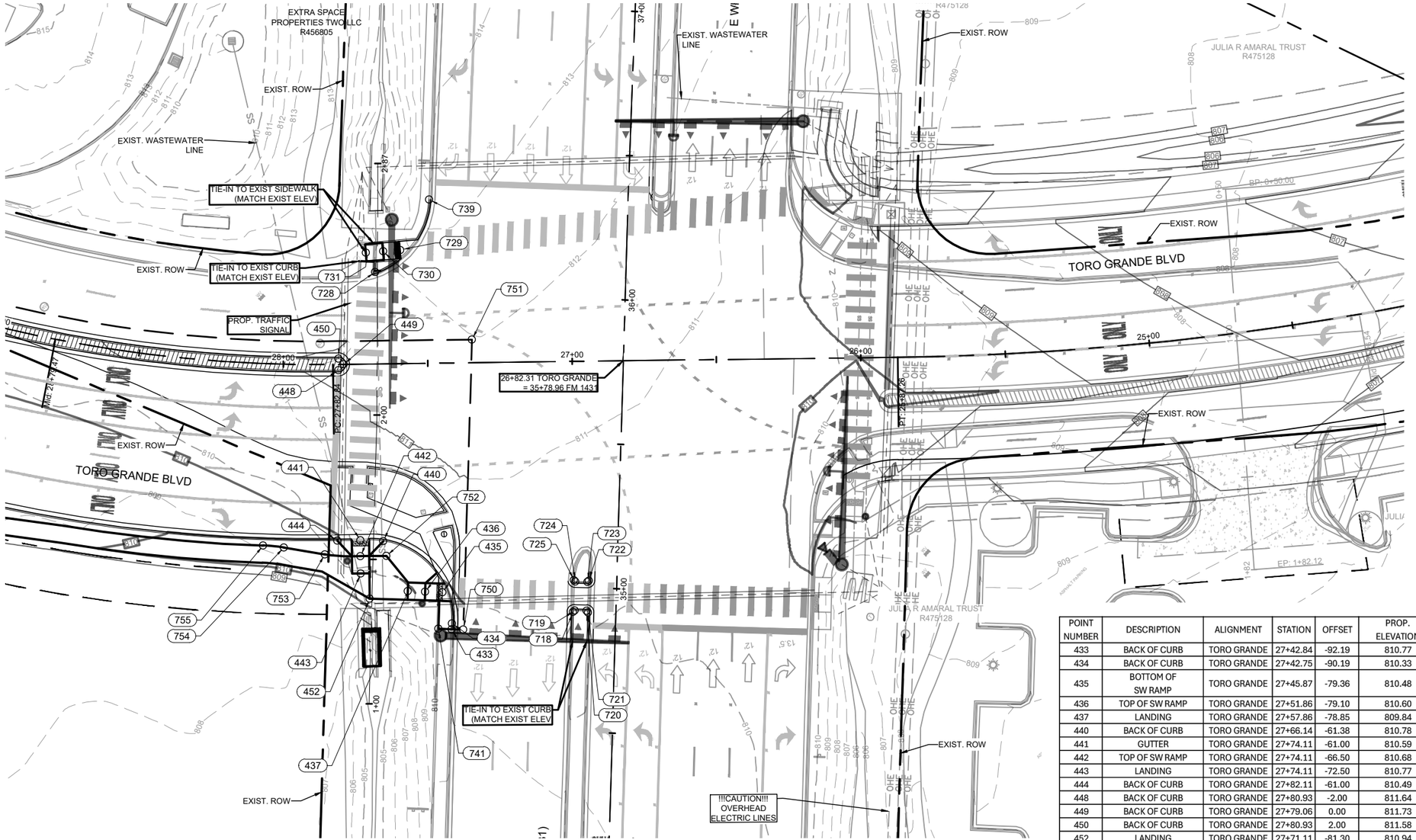
SHEET
RD-401

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\RD-301-DWY-PNP.dwg — Tab: DRIVEWAYS 03 & 04 PLAN AND PROFILE — Plotted: 2/27/2025 12:39 PM By: JAVIER HOLGUIN



POINT NUMBER	DESCRIPTION	ALIGNMENT	STATION	OFFSET	PROP. ELEVATION
433	BACK OF CURB	TORO GRANDE	27+42.84	-92.19	810.77
434	BACK OF CURB	TORO GRANDE	27+42.75	-90.19	810.33
435	BOTTOM OF SW RAMP	TORO GRANDE	27+45.87	-79.36	810.48
436	TOP OF SW RAMP	TORO GRANDE	27+51.86	-79.10	810.60
437	LANDING	TORO GRANDE	27+57.86	-78.85	809.84
440	BACK OF CURB	TORO GRANDE	27+66.14	-61.38	810.78
441	GUTTER	TORO GRANDE	27+74.11	-61.00	810.59
442	TOP OF SW RAMP	TORO GRANDE	27+74.11	-66.50	810.68
443	LANDING	TORO GRANDE	27+74.11	-72.50	810.77
444	BACK OF CURB	TORO GRANDE	27+82.11	-61.00	810.49
448	BACK OF CURB	TORO GRANDE	27+80.93	-2.00	811.64
449	BACK OF CURB	TORO GRANDE	27+79.06	0.00	811.73
450	BACK OF CURB	TORO GRANDE	27+80.93	2.00	811.58
452	LANDING	TORO GRANDE	27+71.11	-81.30	810.94
718	BACK OF CURB	TORO GRANDE	27+00.76	-86.75	810.62
719	BACK OF CURB	TORO GRANDE	27+00.24	-86.27	810.63
720	BACK OF CURB	TORO GRANDE	26+96.10	-86.45	810.61
721	BACK OF CURB	TORO GRANDE	26+95.62	-86.97	810.59
722	BACK OF CURB	TORO GRANDE	26+95.19	-75.97	810.78
723	BACK OF CURB	TORO GRANDE	26+95.71	-76.45	810.79
724	BACK OF CURB	TORO GRANDE	26+99.85	-76.28	810.83
725	BACK OF CURB	TORO GRANDE	27+00.32	-75.75	810.82
726	BACK OF CURB	TORO GRANDE	26+70.79	56.40	812.35
727	BACK OF CURB	TORO GRANDE	26+65.86	57.09	812.22
728	BACK OF CURB	TORO GRANDE	27+67.80	31.81	812.06
729	BACK OF CURB	TORO GRANDE	27+58.97	39.32	812.71
730	BACK OF CURB	TORO GRANDE	27+64.96	38.90	812.21
731	SIDEWALK	TORO GRANDE	27+70.94	38.48	812.21
738	BACK OF CURB	TORO GRANDE	26+22.17	86.76	811.53
739	BACK OF CURB	TORO GRANDE	27+48.78	56.67	MATCH EXISTING
741	SIDEWALK	TORO GRANDE	27+47.46	-91.99	810.38
750	SAWCUT LINE	TORO GRANDE	27+38.84	-92.36	MATCH EXISTING
751	SAWCUT LINE	TORO GRANDE	27+34.56	8.00	811.95
752	SAWCUT LINE	TORO GRANDE	27+65.11	-66.50	810.83
753	SAWCUT LINE	TORO GRANDE	27+86.01	-65.74	810.52
754	SAWCUT LINE	TORO GRANDE	27+98.51	-63.51	810.35
755	SAWCUT LINE	TORO GRANDE	28+04.85	-63.00	810.28

SCALE: 1" = 40'

LEGEND

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3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.
4. CONTRACTOR TO REGRADE SIDEWALKS AS NEEDED TO TIE INTO EXISTING SIDEWALKS PER ADA REQUIREMENTS.
5. CITY OF AUSTIN TO ADD SIDEWALK ADN SHARED USE PATH AFTER JOHNNY MORRIS CONSTRUCTION (BY OTHERS).
6. ALL RAMPS AND SIDEWALKS TO MEET ADA REQUIREMENTS
7. ALL SIDEWALKS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED PER COA STANDARDS AT NO COST TO THE CITY.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271 | LAND SURVEYING FIRM NO. 10047500
8000 N. MOPAC EXPRESSWAY, SUITE 805
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

TORO GRANDE BLVD AT FM 1431 INTERSECTION LAYOUT

TORO GRANDE ROADWAY IMPROVEMENTS CEDAR PARK, TEXAS

CEDAR PARK

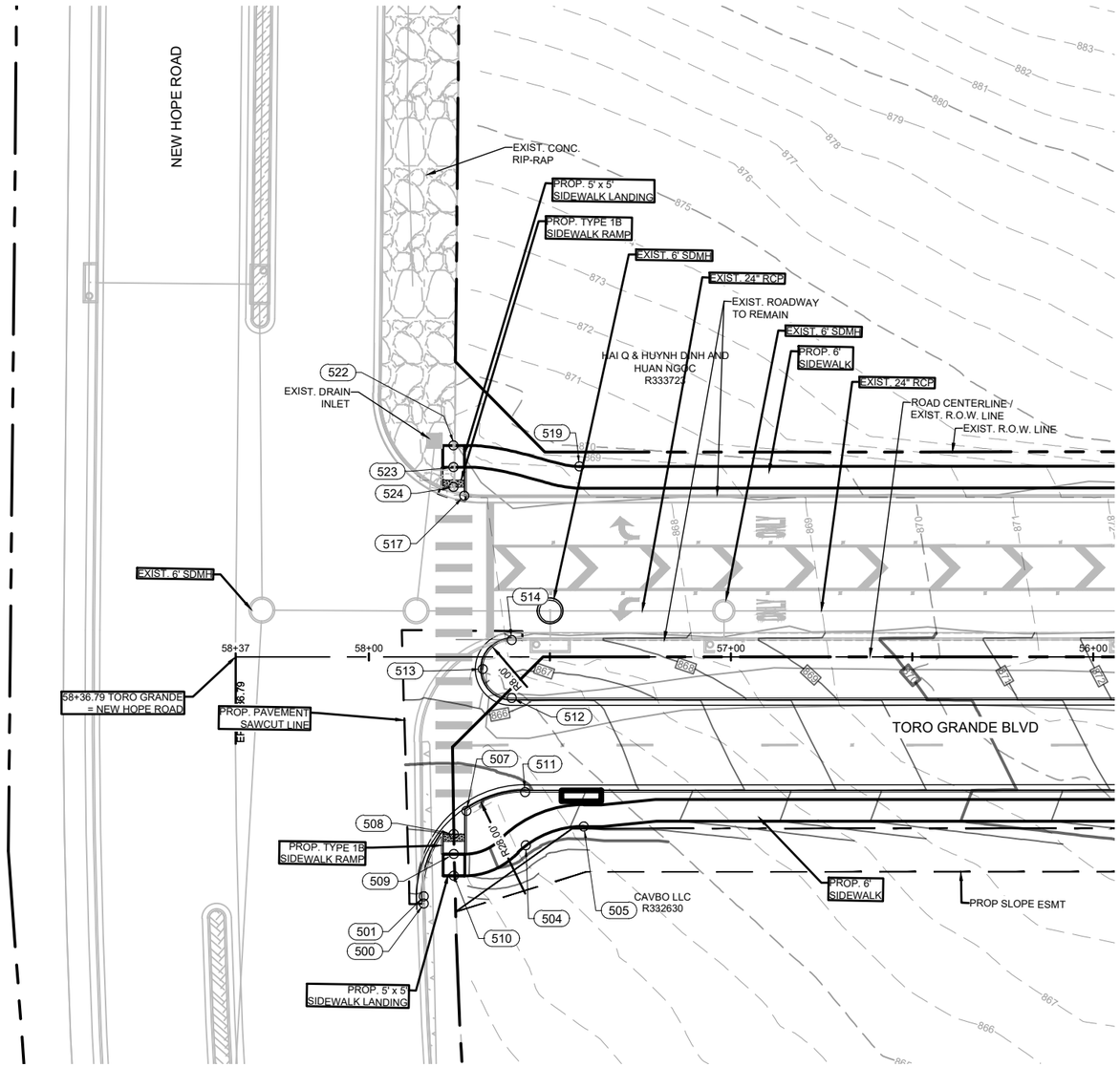
PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. MORALES
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
RD-500

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-401-ROAD-INTERSECT_N.dwg – Tab: TORO GRANDE RD AT FM 1431 INTERSECTION LAYOUT – Plotted: 2/27/2025 12:41 PM By: JAVIER HOLGUIN



POINT NUMBER	DESCRIPTION	ALIGNMENT	STATION	OFFSET	PROP. ELEVATION
500	BACK OF CURB	TORO GRANDE	57+84.78	-68.2277	863.32
501	BACK OF CURB	TORO GRANDE	57+84.84	-66.2285	863.43
504	BACK OF SIDEWALK	TORO GRANDE	57+56.67	-52.1488	865.72
505	BACK OF SIDEWALK	TORO GRANDE	57+38.82	-45.4319	866.17
507	BACK OF CURB	TORO GRANDE	57+73.04	-42.5923	864.81
508	BOTTOM OF SW RAMP	TORO GRANDE	57+76.54	-49.0272	864.32
509	TOP OF SW RAMP	TORO GRANDE	57+76.53	-54.5244	864.42
510	LANDING	TORO GRANDE	57+76.51	-60.5244	864.42
511	BACK OF CURB	TORO GRANDE	57+56.86	-37.4373	865.44
512	BACK OF CURB	TORO GRANDE	57+60.55	-11.4384	866.61
513	BACK OF CURB	TORO GRANDE	57+68.55	-3.4407	867.33
514	BACK OF CURB	TORO GRANDE	57+60.55	4.5616	867.50
517	BACK OF CURB	TORO GRANDE	57+73.63	44.463	MATCH EXISTING
519	BACK OF SIDEWALK	TORO GRANDE	57+41.84	52.5625	868.11
522	LANDING	TORO GRANDE	57+76.57	58.3538	867.50
523	TOP OF SW RAMP	TORO GRANDE	57+76.57	52.3726	867.50
524	BOTTOM OF SW RAMP	TORO GRANDE	57+76.56	46.8755	867.39

N

0 20' 40'

SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- EX. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- EX. U.G. TELECOM
- EX. U.G FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- EX. IRON FENCE
- EX. WIRE FENCE
- EX. GUARD RAIL
- PR. GUARD RAIL
- EROSION HAZARD REVIEW BUFFER ZONE
- HIGH WATER MARKS
- PR. CONC. DRIVEWAY
- PR. TRAIL
- 100 YR FLOOD PLAIN
- 500 YR FLOOD PLAIN
- PR. MEDIAN STAMPING
- 101 POINT NUMBER

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.
4. CONTRACTOR TO REGRADE SIDEWALKS AS NEEDED TO TIE INTO EXISTING SIDEWALKS PER ADA REQUIREMENTS.
5. CITY OF AUSTIN TO ADD SIDEWALK ADN SHARED USE PATH AFTER JOHNNY MORRIS CONSTRUCTION (BY OTHERS).
6. ALL RAMPS AND SIDEWALKS TO MEET ADA REQUIREMENTS
7. ALL SIDEWALKS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED PER COA STANDARDS AT NO COST TO THE CITY.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-271 | LAND SURVEYING FIRM NO. 10047500
9600 N. MOPAC EXPRESSWAY - SUITE 825
AUSTIN, TEXAS 78759
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WWW.COBBFENDLEY.COM

TORO GRANDE RD AT NEW HOPE RD INTERSECTION LAYOUT

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
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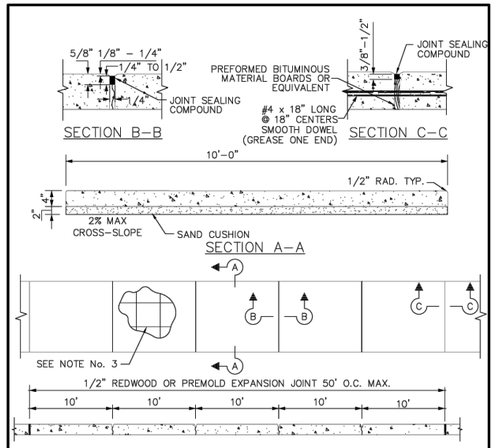
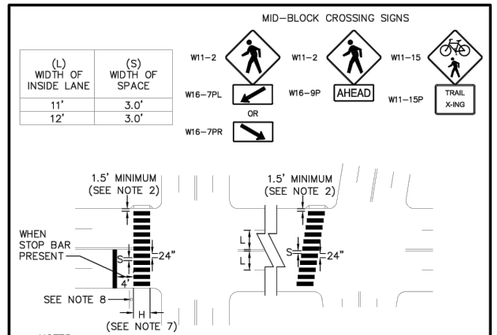
SHEET
RD-501



NOTES:
1. CONCRETE SHALL BE CLASS "A", 3000 PSI.
2. REINFORCEMENT SHALL BE #4 BARS @ 18" EACH WAY.
3. PROVIDE EXPANSION JOINTS ALSO WHEN CONNECTING TO EXISTING SIDEWALKS, DRIVEWAYS, CURBS, AND GUTTER.

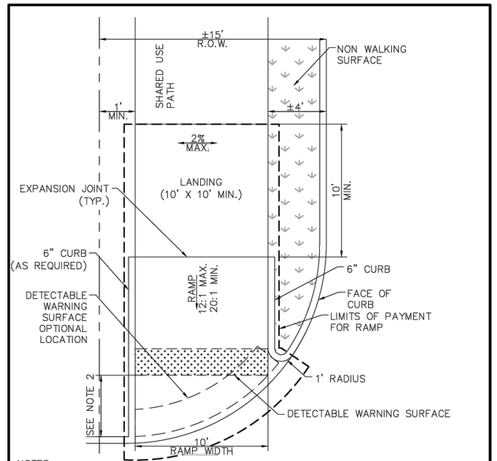
CEDAR PARK Construction Standards	CONCRETE SHARED USE PATH	REVISED MAY 2023 RD-07



(L) WIDTH OF INSIDE LANE	(S) WIDTH OF SPACE
11'	3.0'
12'	3.0'

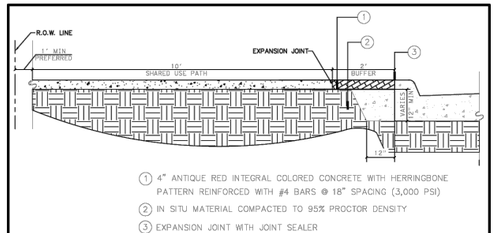
NOTES:
1. THERMOPLASTIC STRIPES TO BE CENTERED ON CENTERLINE AND LANE LINES.
2. A MINIMUM OF 1.5 FT. CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
3. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
4. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.
5. THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.
6. THE BLOCKS SHALL BE A MINIMUM OF 10' LONG.
7. MAXIMUM WIDTH OF SPACE (S) SHALL BE 5'.
8. FOR MID–BLOCK CROSSINGS W11–2 WITH W16–7P OR W16–9P OR W11–15 WITH W11–15P SIGNS TO BE INSTALLED AT AND ON APPROACH EXCEPT WHERE STOP SIGNS ARE PROVIDED.

CEDAR PARK Construction Standards	CONTINENTAL CROSSWALK	REVISED MAY 2023 RD-01



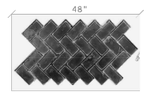
NOTES:
1. VALVE BOXES/CLEANOUTS ARE NOT TO BE PLACED IN RAMP AREA OR WITHIN THE SHARED USE PATH.
2. IF THE DISTANCE FROM THE END OF THE RAMP TO THE BACK OF CURB IS GREATER THAN 5 FEET, DETECTABLE WARNING SURFACE SHALL BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB AND RUN THE ENTIRE LENGTH OF THE OPENING. SLOPE TO BE 2% MAX. IN ALL DIRECTIONS.

CEDAR PARK Construction Standards	PERPENDICULAR SHARED USE PATH RAMP	REVISED MAY 2023 RD-05

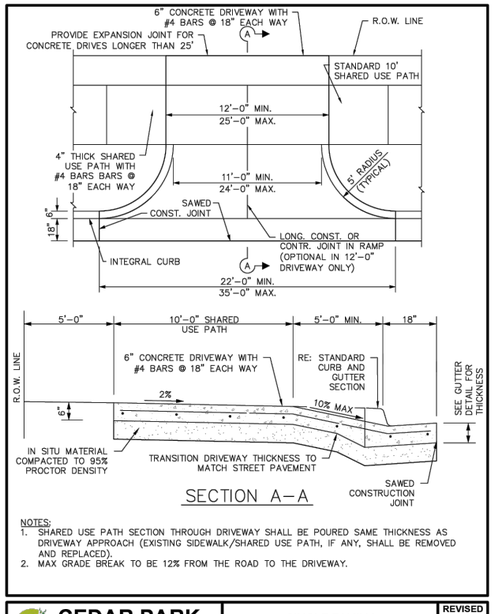


① 4" ANTIQUE RED INTEGRAL COLORED CONCRETE WITH HERRINGBONE PATTERN REINFORCED WITH #4 BARS @ 18" SPACING (3,000 PSI)
② IN SITU MATERIAL COMPACTED TO 95% PROCTOR DENSITY
③ EXPANSION JOINT WITH JOINT SEALER

INTEGRAL COLORED AND TEXTURED CONCRETE STAMP TOOL

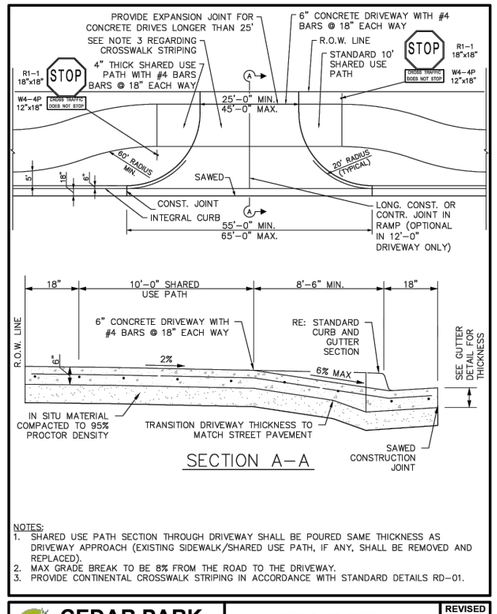


CEDAR PARK Construction Standards	STAMPED CONCRETE BUFFER	REVISED MAY 2023 RD-06



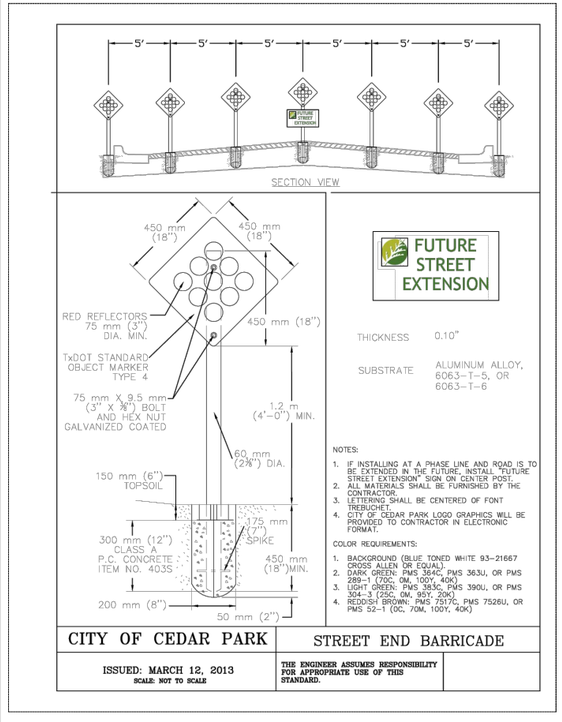
NOTES:
1. SHARED USE PATH SECTION THROUGH DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH (EXISTING SIDEWALK/SHARED USE PATH, IF ANY, SHALL BE REMOVED AND REPLACED).
2. MAX GRADE BREAK TO BE 12% FROM THE ROAD TO THE DRIVEWAY.

CEDAR PARK Construction Standards	SINGLE FAMILY RESIDENTIAL DRIVEWAY	REVISED MAY 2023 RD-02



NOTES:
1. SHARED USE PATH SECTION THROUGH DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH (EXISTING SIDEWALK/SHARED USE PATH, IF ANY, SHALL BE REMOVED AND REPLACED).
2. MAX GRADE BREAK TO BE 8% FROM THE ROAD TO THE DRIVEWAY.
3. PROVIDE CONTINENTAL CROSSWALK STRIPING IN ACCORDANCE WITH STANDARD DETAILS RD–01.

CEDAR PARK Construction Standards	STANDARD TYPE II COMMERCIAL DRIVEWAY	REVISED MAY 2023 RD-03



CITY OF CEDAR PARK	STREET END BARRICADE
ISSUED: MARCH 12, 2013 SCALE: NOT TO SCALE	THE ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10048700
9000 N. MOPAC EXPRESSWAY, SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

ROADWAY STANDARD DETAILS

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
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LICENSED PROFESSIONAL ENGINEER
2/27/2025

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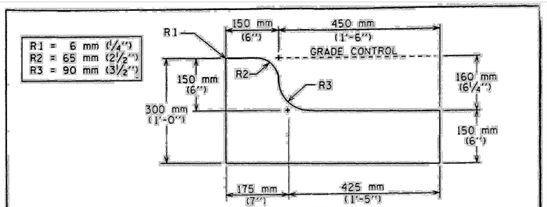
SHEET
RD-901



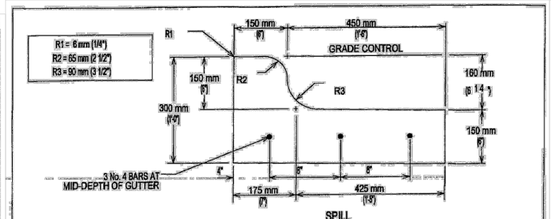
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

CURB AND GUTTER SECTION

Luis Rivera 9/29/99
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 430S-1



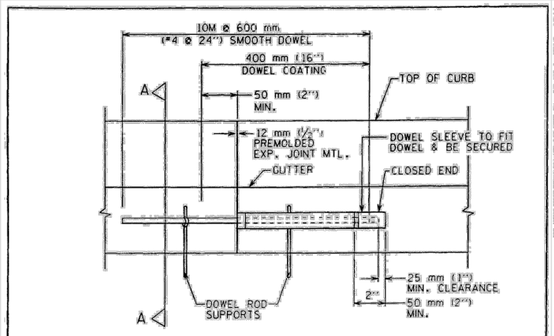
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

REINFORCED CURB AND GUTTER SECTION

1/4/10
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 430S-2



SEE STANDARD 430S-1 FOR TYPICAL CURB AND GUTTER SECTIONS.

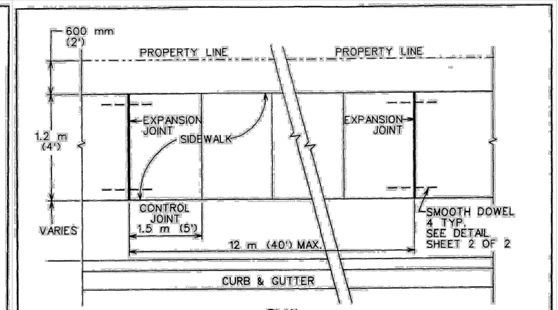
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

CURB EXPANSION JOINT DOWEL DETAIL

Luis Rivera 9/29/99
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 430S-3



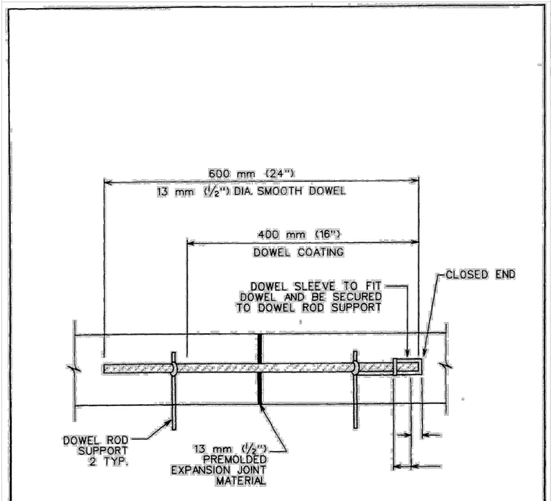
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

SIDEWALK

Bill Gardner 3/26/08
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 432S-1
1 OF 3



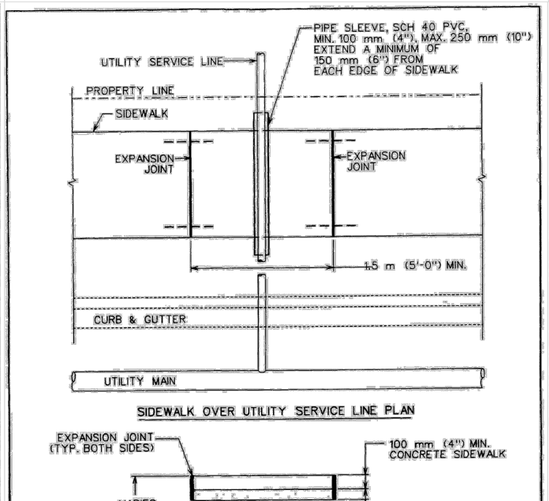
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

SIDEWALK

Bill Gardner 3/26/08
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 432S-1
2 OF 3



NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

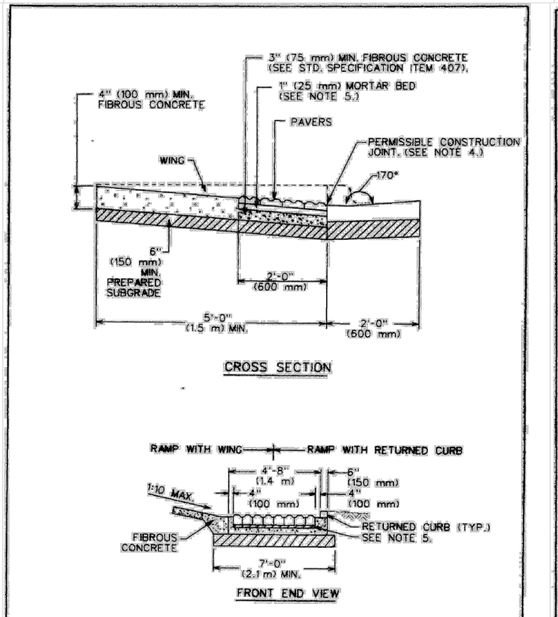
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

SIDEWALK

Bill Gardner 3/26/08
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 432S-1
3 OF 3



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

DETECTABLE WARNING-PAVER (CITY PROPERTY/EASMENTS)

Bill Gardner 6/21/07
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 432S-2A
1 OF 2

GENERAL NOTES:

1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION ON CITY PROPERTY AND EASEMENT AREAS ONLY.
2. PAVERS ARE REQUIRED FOR ALL CURB RAMP INSTALLATIONS.
3. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9" (23 mm), A NOMINAL HEIGHT OF 0.2" (5 mm) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35" (60 mm) AND SHALL CONSTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (Re: ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVER PATTERN SHALL BE BASKET WEAVE UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
4. TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO 1/4" (6 mm) JOINT SIZE. GAPS LARGER THAN 1/4" (6 mm) MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM SECTION 403S.3.5. MORTAR AND GROUT. ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 403S, CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
7. CURB RAMPS WITH RETURNED CURB MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

DETECTABLE WARNING-PAVER (CITY PROPERTY/EASMENTS)

Bill Gardner 6/21/07
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 432S-2A
2 OF 2

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10065700
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512.834.9789 | FAX 512.834.7727
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ROADWAY STANDARD DETAILS

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

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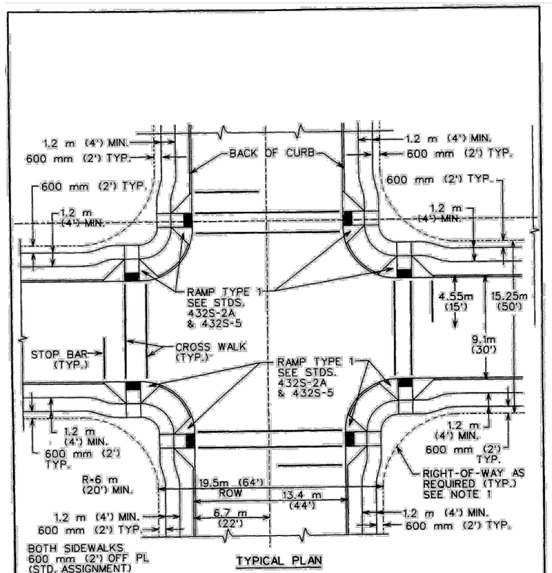
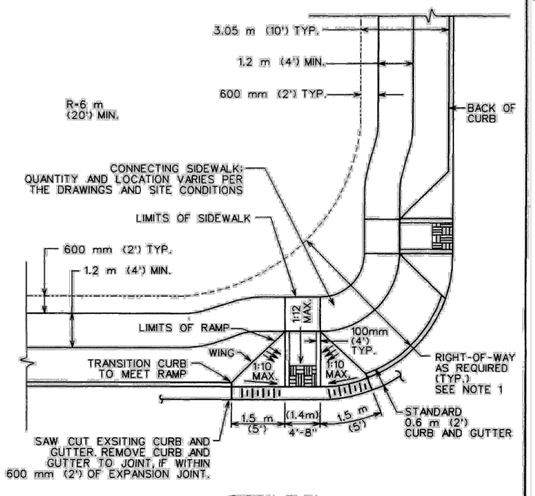
SHEET
RD-902

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\RD-901-DETL.dwg -- Tab: ROAD-DETL-02 -- Plotted: 2/27/2025 12:42 PM By: JAVIER HOLGUIN



TYPICAL PLAN

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
Bill Gardner 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 1 OF 3



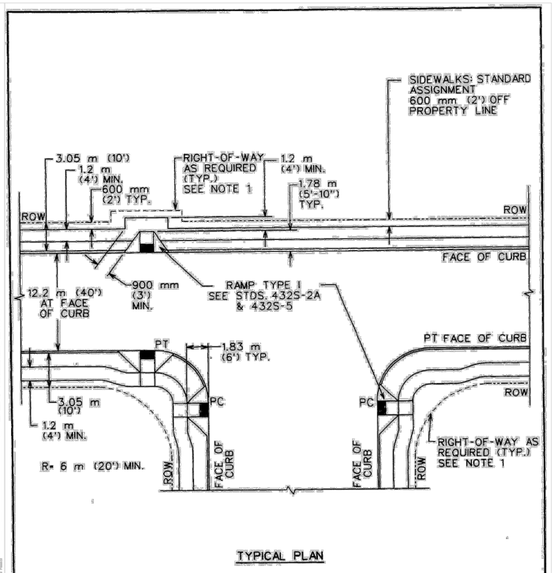
TYPICAL PLAN

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
Bill Gardner 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 2 OF 3

GENERAL NOTES:

1. THIS STANDARD IS APPICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
2. THIS STANDARD REPRESENTS A TYPICAL CURB RAMP DESIGN FOR A NEWLY CONSTRUCTED INTERSECTION WITH A 6 m (20') RADIUS. LARGER RADII, STREET GRADES, LIMITED SIGHT DISTANCES, STREET CLASSIFICATION, SIGNALIZATION AND OTHER FACTORS MAY REQUIRE THE ENGINEER OR DESIGNATED REPRESENTATIVE TO MODIFY THIS STANDARD. SUFFICIENT RIGHT-OF-WAY SHALL BE DEDICATED SUCH THAT THE ENTIRE CURB RAMP, INCLUDING LANDING, AND THE INTER-CONNECTING SIDEWALK ARE CONTAINED WITHIN THE RIGHT-OF-WAY.
3. THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONFIGURED TO MAINTAIN ALL RUNOFF FROM A 25 YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B). WHEN THERE IS AN ELEVATION DIFFERENCE BETWEEN THE BOTTOM OF RAMPS (IE. ELEVATION AT THE GUTTER) WITHIN A QUADRANT OF AN INTERSECTION, THE LOWER ELEVATION RAMP SHALL BE CONSTRUCTED WITH A POSITIVE RAMP SLOPE OF 1:12 IN ACCORDANCE WITH STANDARDS 432S-5, 432S-5A AND 432S-5B.
4. STANDARD ASSIGNMENT OF SIDEWALKS IS 600 mm (2') OFF PROPERTY LINE, EXCEPT AS INDICATED ON THE DRAWINGS.
5. ALTHOUGH CURB RAMPS MAY BE PLACED WITHIN THE RADIUS, PLACING THE RAMP OUTSIDE OF THE RADIUS WILL ALLOW FOR THE GREATEST DIFFERENCE IN ELEVATION BETWEEN THE RAMPS.
6. WINGS ARE REQUIRED ONLY IF PEDESTRIANS WOULD NORMALLY CROSS THE RAMP.
7. LANDINGS SHALL BE FLAT AND MATCH PT, PC OR TOP OF CURB ELEVATION.
8. CURB RAMPS WILL BE PERPENDICULAR TO ROADWAY CENTERLINES AND SHALL ALIGN WITH EACH OTHER.
9. GRADES ON SIDEWALKS LEADING TO OR FROM THE RAMPS SHALL FOLLOW CURB GRADES.
10. THE SLOPE OF THE SIDEWALK WHICH IS LOCATED WITHIN THE RADIUS AND CONNECTS TWO CURB RAMPS SHALL NOT EXCEED 1:20. THE DEVELOPER, AS PART OF THE CURB RAMP INSTALLATION, SHALL CONSTRUCT THIS CONNECTING SIDEWALK.
11. STRIPING AND SIGNAGE NOT REQUIRED IN ALL INSTANCES. STOP BARS, IF REQUIRED, SHALL BE LOCATED 1.2 m (4') FROM CROSSWALK.
12. IF A MEDIAN EXTENDS INTO THE CROSSWALK AREA, AN OPENING SHALL BE PROVIDED IN THE MEDIAN THE SAME WIDTH AS THE CURB RAMP.
13. CURB INLETS SHALL NOT BE LOCATED WITHIN 3.0 m (10') OF A CURB RAMP.
14. GUTTER SHALL PROVIDE SMOOTH TRANSITION TO RAMPS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
Bill Gardner 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 3 OF 3



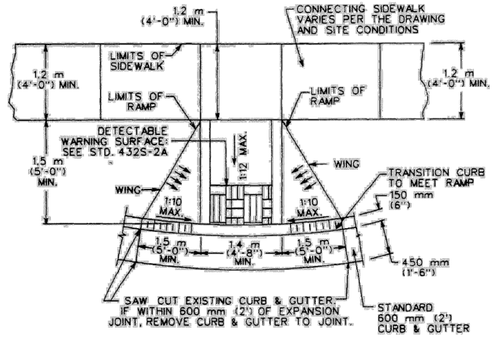
TYPICAL PLAN

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS - "T" INTERSECTION	
Bill Gardner 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3A 1 OF 2

GENERAL NOTES:

1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
2. THIS STANDARD REPRESENTS A TYPICAL CURB RAMP DESIGN FOR A NEWLY CONSTRUCTED INTERSECTION WITH A 6 m (20') RADIUS. LARGER RADII, STREET GRADES, LIMITED SIGHT DISTANCES, STREET CLASSIFICATION, SIGNALIZATION AND OTHER FACTORS MAY REQUIRE THE ENGINEER OR DESIGNATED REPRESENTATIVE TO MODIFY THIS STANDARD. SUFFICIENT RIGHT-OF-WAY SHALL BE DEDICATED SUCH THAT THE ENTIRE CURB RAMP, INCLUDING LANDING, AND THE INTER-CONNECTING SIDEWALK ARE CONTAINED WITHIN THE RIGHT-OF-WAY.
3. THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONFIGURED TO MAINTAIN ALL RUNOFF FROM A 25 YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B). WHEN THERE IS AN ELEVATION DIFFERENCE BETWEEN THE BOTTOM OF RAMPS (IE. ELEVATION AT THE GUTTER) WITHIN A QUADRANT OF AN INTERSECTION, THE LOWER ELEVATION RAMP SHALL BE CONSTRUCTED WITH A POSITIVE RAMP SLOPE OF 1:12 IN ACCORDANCE WITH STANDARDS 432S-5, 432S-5A AND 432S-5B.
4. STANDARD ASSIGNMENT OF SIDEWALKS IS 600 mm (2') OFF PROPERTY LINE, EXCEPT AS INDICATED ON THE DRAWINGS.
5. ALTHOUGH CURB RAMPS MAY BE PLACED WITHIN THE RADIUS, PLACING THE RAMP OUTSIDE OF THE RADIUS WILL ALLOW FOR THE GREATEST DIFFERENCE IN ELEVATION BETWEEN THE RAMPS.
6. WINGS ARE REQUIRED ONLY IF PEDESTRIANS WOULD NORMALLY CROSS THE RAMP.
7. LANDINGS SHALL BE FLAT AND MATCH PT, PC OR TOP OF CURB ELEVATION.
8. CURB RAMPS WILL BE PERPENDICULAR TO ROADWAY CENTERLINES AND SHALL ALIGN WITH EACH OTHER.
9. GRADES ON SIDEWALKS LEADING TO OR FROM THE RAMPS SHALL FOLLOW CURB GRADES.
10. THE SLOPE OF THE SIDEWALK WHICH IS LOCATED WITHIN THE RADIUS AND CONNECTS TWO CURB RAMPS SHALL NOT EXCEED 1:20. THE DEVELOPER, AS PART OF THE CURB RAMP INSTALLATION, SHALL CONSTRUCT THIS CONNECTING SIDEWALK.
11. STRIPING AND SIGNAGE NOT REQUIRED IN ALL INSTANCES. STOP BARS, IF REQUIRED, SHALL BE LOCATED 1.2 m (4') FROM CROSSWALK.
12. IF A MEDIAN EXTENDS INTO THE CROSSWALK AREA, AN OPENING SHALL BE PROVIDED IN THE MEDIAN THE SAME WIDTH AS THE CURB RAMP.
13. CURB INLETS SHALL NOT BE LOCATED WITHIN 3.0 m (10') OF A CURB RAMP.
14. GUTTER SHALL PROVIDE SMOOTH TRANSITION TO RAMPS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS - "T" INTERSECTION	
Bill Gardner 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3A 2 OF 2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 SIDEWALK CURB RAMP	
Bill Gardner 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-5

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-271, LAND SURVEYING FIRM NO. 10065700
6500 N. MOPAC EXPRESSWAY, SUITE 100
AUSTIN, TEXAS 78731 (512) 839-1733
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

ROADWAY STANDARD DETAILS

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

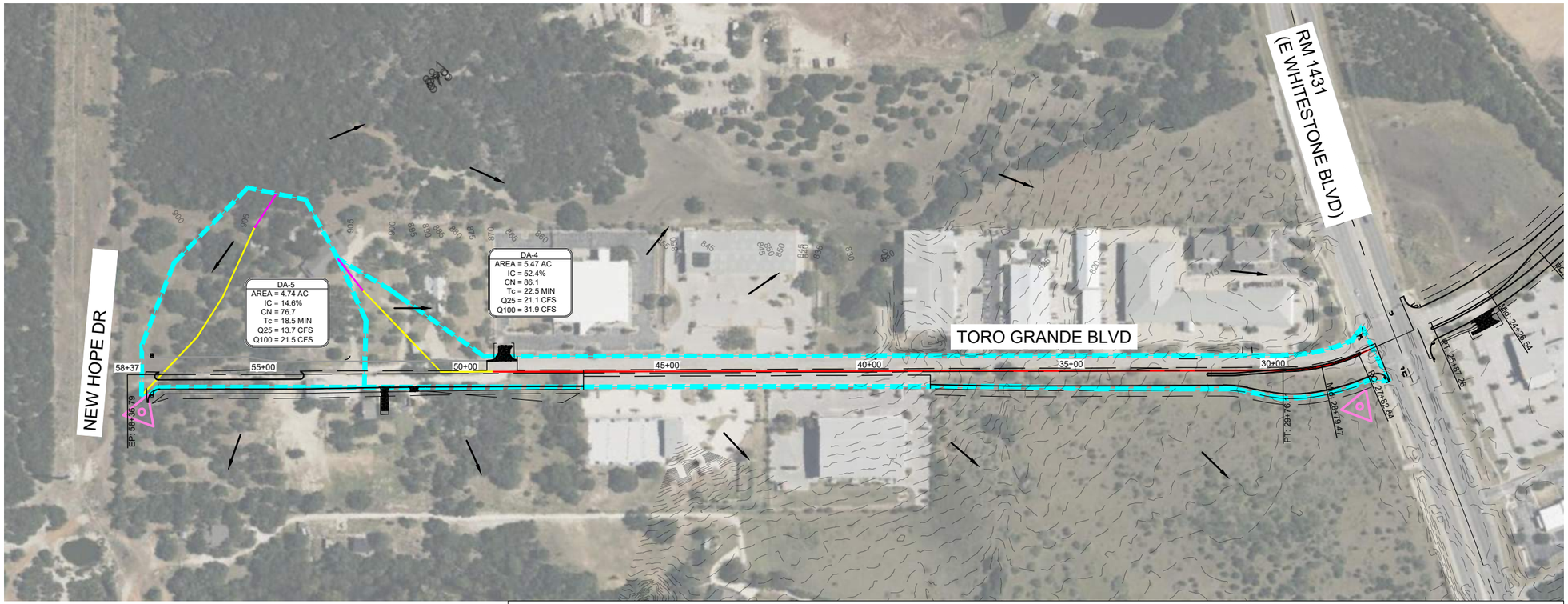
CEDAR PARK

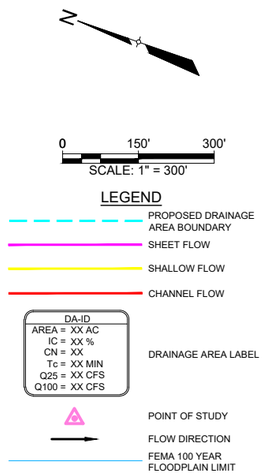
PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
RD-903





EXISTING CONDITIONS											
DA	AREA (AC)	IMPERVIOUS COVER (AC)	IMPERVIOUS COVER (%)	TIME OF CONCENTRATION (MIN)	CN	C25	C100	I25 (IN/HR)	I100 (IN/HR)	Q25 (CFS)	Q100 (CFS)
4	5.47	2.87	52.4%	22.5	86.1	0.61	0.69	6.3	8.4	21.1	31.9
5	4.74	0.69	14.6%	18.5	76.7	0.42	0.49	6.9	9.3	13.7	21.5

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

EXISTING DRAINAGE AREA MAP - NORTH

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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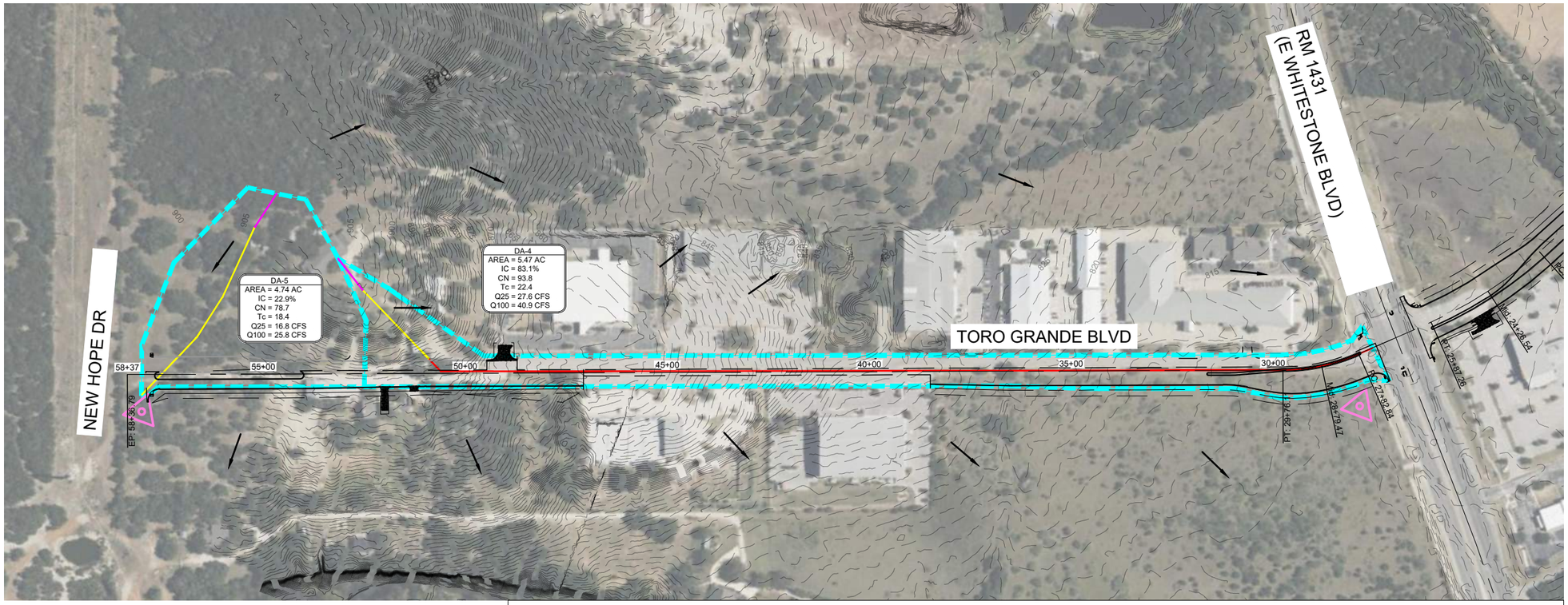
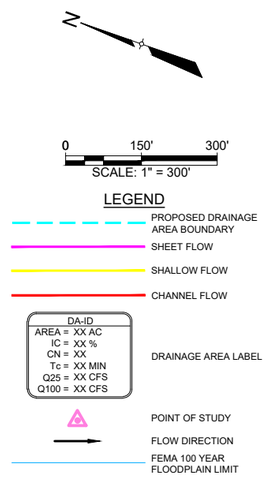
SHEET
SD-100

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-DA-MAPS.dwg -- Tab: EXISTING DRAINAGE AREA MAP -- Plotted: 2/12/2025 8:02 PM By: JAVIER HOLGUIN





DEVELOPED CONDITIONS											
DA	AREA (AC)	IMPERVIOUS COVER (AC)	IMPERVIOUS COVER (%)	TIME OF CONCENTRATION (MIN)	CN	C25	C100	I25 (IN/HR)	I100 (IN/HR)	Q25 (CFS)	Q100 (CFS)
4	5.47	4.55	83.1%	22.4	93.8	0.80	0.89	6.3	8.4	27.6	40.9
5	4.74	1.09	22.9%	18.4	78.7	0.51	0.58	7.0	9.3	16.8	25.8

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

DEVELOPED DRAINAGE AREA MAP - NORTH

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

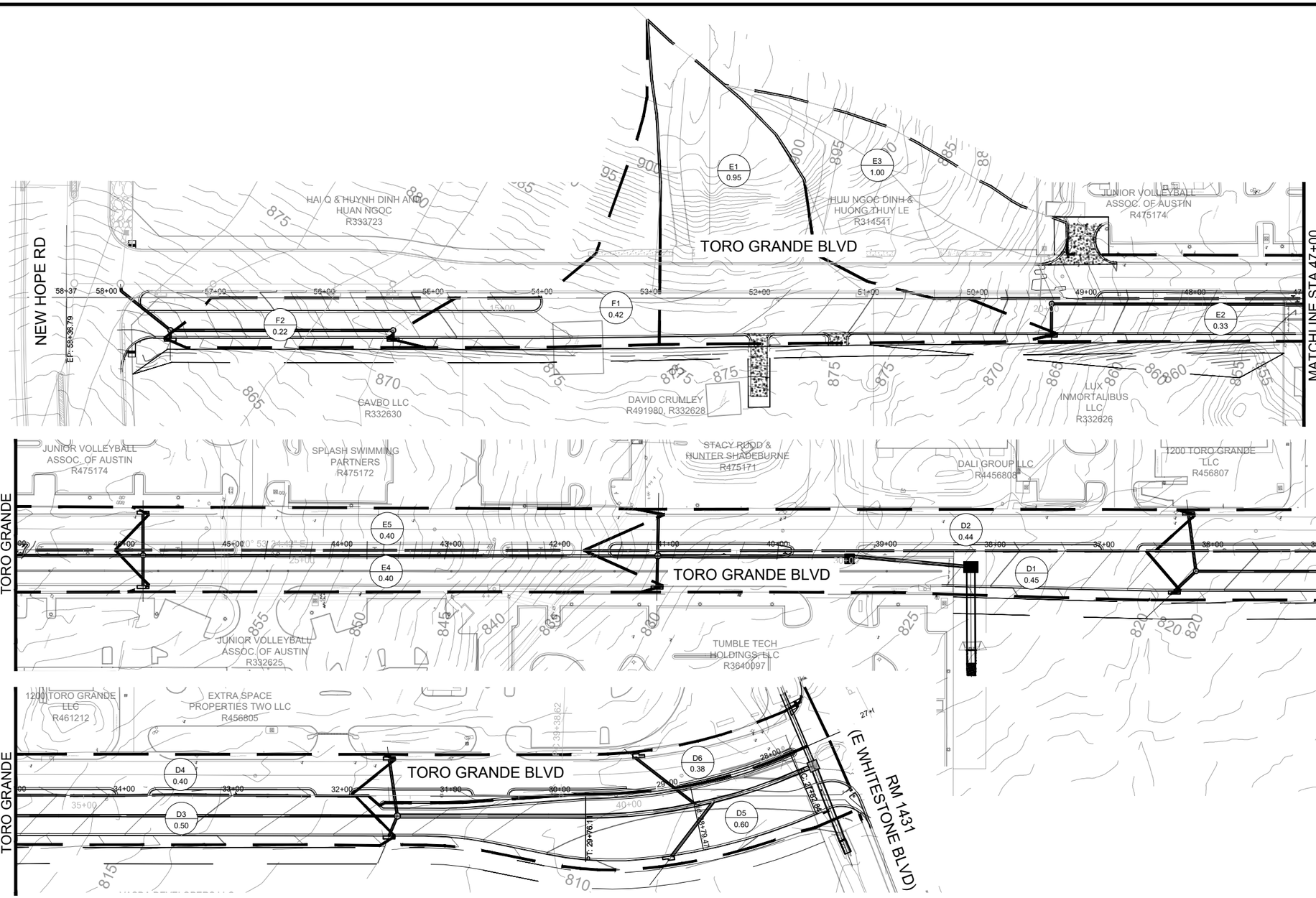
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
SD-101

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-DA-MAPS.dwg -- Tab: EXISTING DRAINAGE AREA MAP (2) -- Plotted: 2/12/2025 8:03 PM By: JAVIER HOLGUIN



INLET ID	AREA (AC)	COMMERCE ROW AREA	TORO GRANDE ROW AREA	OPEN SPACE	TIME OF CONCEN-TRATION (MIN)	C25	C100	I25 (IN/HR)	I100 (IN/HR)	Q25 (IN/HR)	Q100 (IN/HR)	INLET TYPE
D1	0.45	0.00	0.45	0.00	5.3	0.70	0.78	11.3	15.0	3.6	5.3	ON-GRADE
D2	0.44	0.00	0.44	0.00	5.3	0.70	0.78	11.3	15.0	3.5	5.2	ON-GRADE
D3	0.50	0.00	0.50	0.00	6.0	0.70	0.78	10.9	14.5	3.8	5.7	ON-GRADE
D4	0.40	0.00	0.40	0.00	6.2	0.70	0.78	10.8	14.3	3.0	4.5	ON-GRADE
D5	0.60	0.00	0.60	0.00	5.0	0.70	0.78	11.5	15.2	4.9	7.2	SUMP
D6	0.38	0.00	0.38	0.00	5.0	0.70	0.78	11.5	15.2	3.1	4.6	SUMP
E1	0.95	0.00	0.49	0.47	14.0	0.55	0.63	7.9	10.5	4.1	6.3	ON-GRADE
E2	0.33	0.00	0.33	0.00	5.0	0.70	0.78	11.5	15.2	2.7	4.0	ON-GRADE
E3	1.00	0.00	0.46	0.54	9.5	0.53	0.61	9.3	12.4	5.0	7.6	ON-GRADE
E4	0.40	0.00	0.40	0.00	5.2	0.70	0.78	11.3	15.1	3.2	4.7	ON-GRADE
E5	0.40	0.00	0.40	0.00	5.2	0.70	0.78	11.3	15.1	3.2	4.8	ON-GRADE
F1	0.42	0.00	0.30	0.11	9.0	0.62	0.70	9.5	12.6	2.4	3.7	ON-GRADE
F2	0.22	0.00	0.22	0.00	5.0	0.70	0.78	11.5	15.2	1.8	2.7	ON-GRADE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046705
9000 N. MOPAC EXPRESSWAY, SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

INTERNAL DRAINAGE AREA MAP -NORTH

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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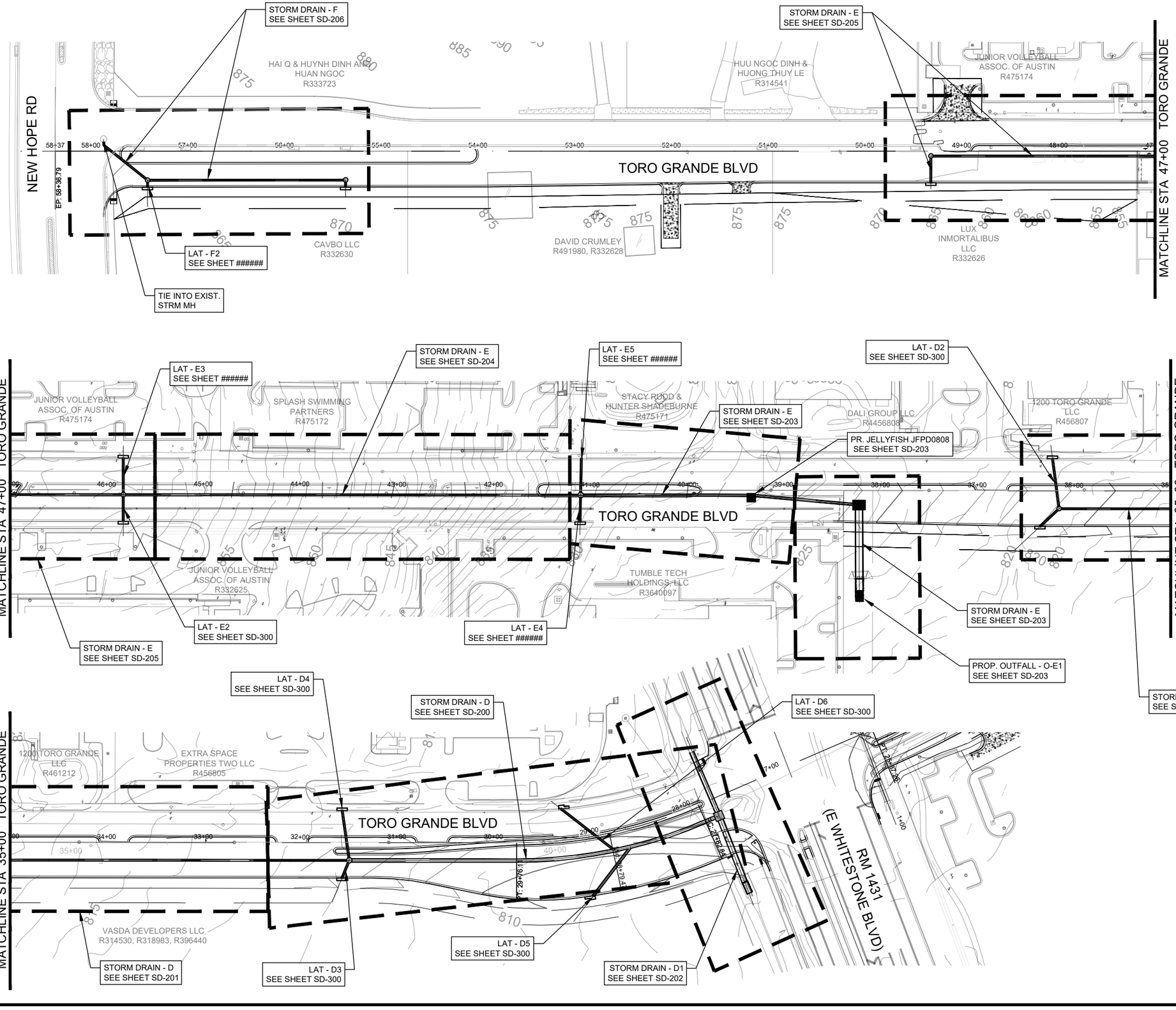
SHEET
SD-102

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-MAPS.dwg – Tab: INTERNAL DRAINAGE AREA MAP – Plotted: 2/12/2025 8:05 PM By: JAVIER HOLGUIN



Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-MAPS.dwg — Tab: OVERALL STORM DRAIN PLAN — Plotted: 2/12/2025 8:06 PM By: JAVIER HOLGUIN

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046703
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AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

OVERALL STORM DRAIN PLAN - NORTH

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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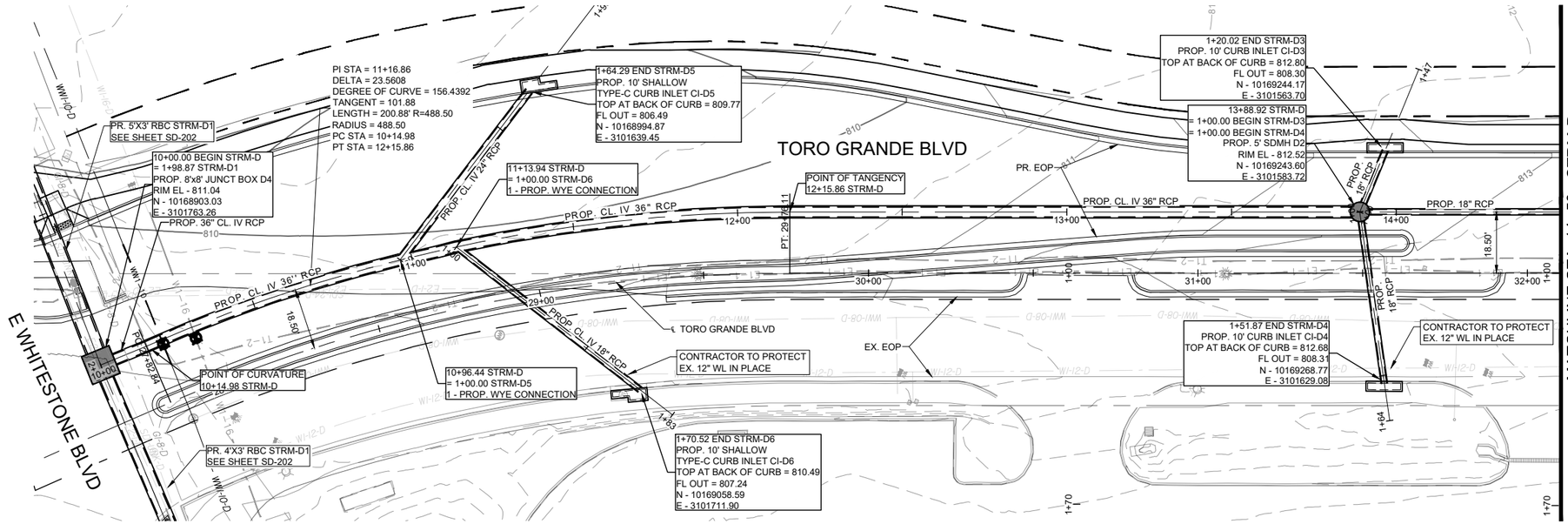
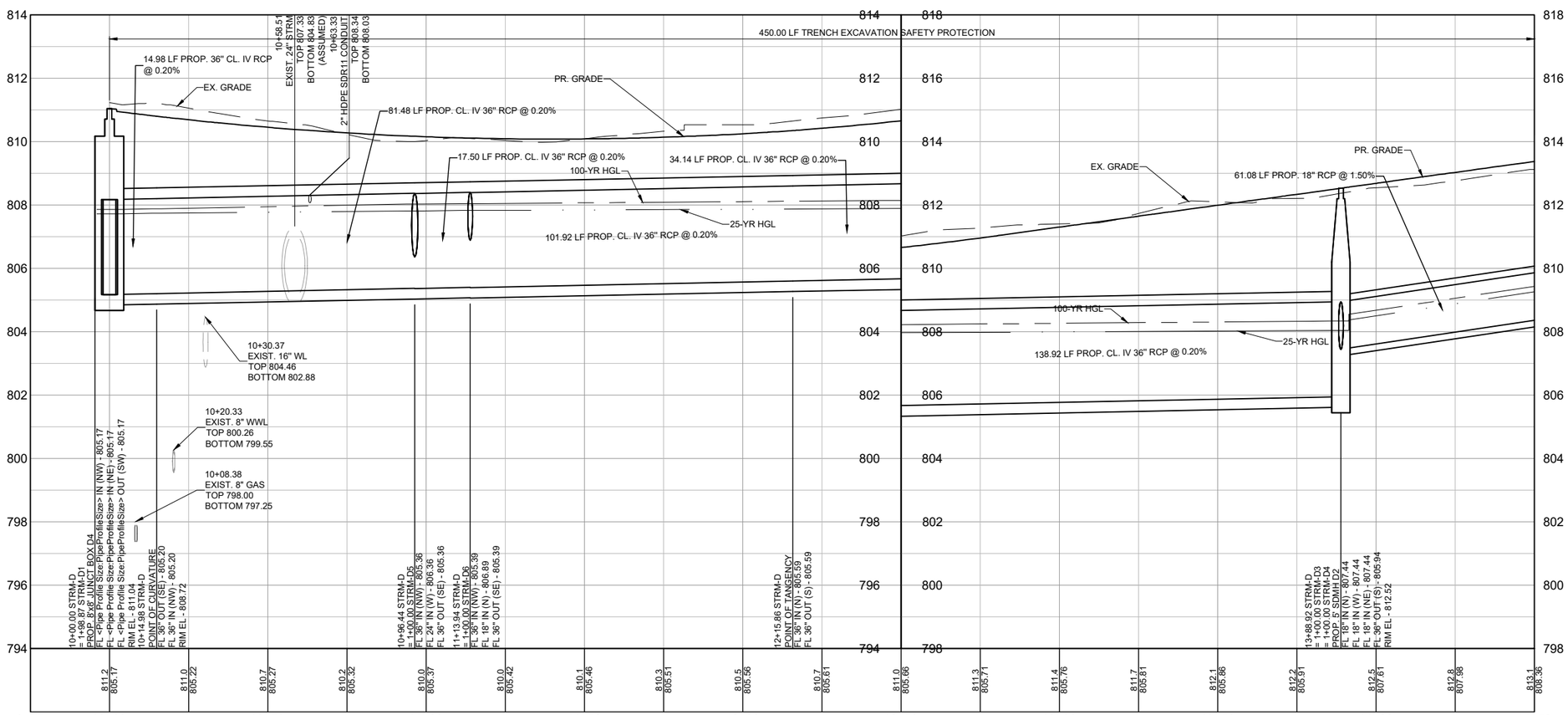
SHEET
SD-103



LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
- IRON FENCE
- WIRE FENCE



STRM-D 9+75 TO 14+50

EXISTING GRADE / FLOW LINE OF PIPE

PROFILE SCALE

1"=40' HORIZ.
1" = 4' VERT.

LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274 , LAND SURVEYING FIRM NO. 10046715
9000 N. MOPAC EXPRESSWAY, SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN D PLAN AND PROFILE BEGIN TO STA. 14+50

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO.	2312-052-02/03
DESIGN:	B. GUINN
DRAWN:	B. GUINN
CHECK:	L. PRINCE
APPR:	J. HASTINGS
DATE:	2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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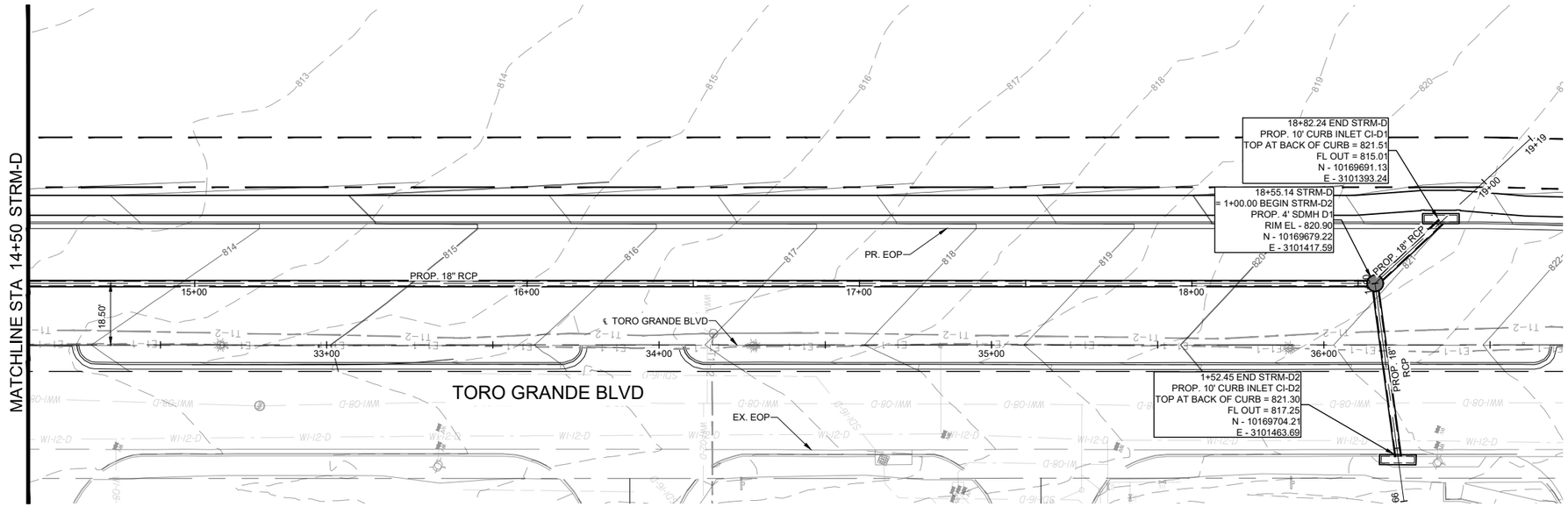
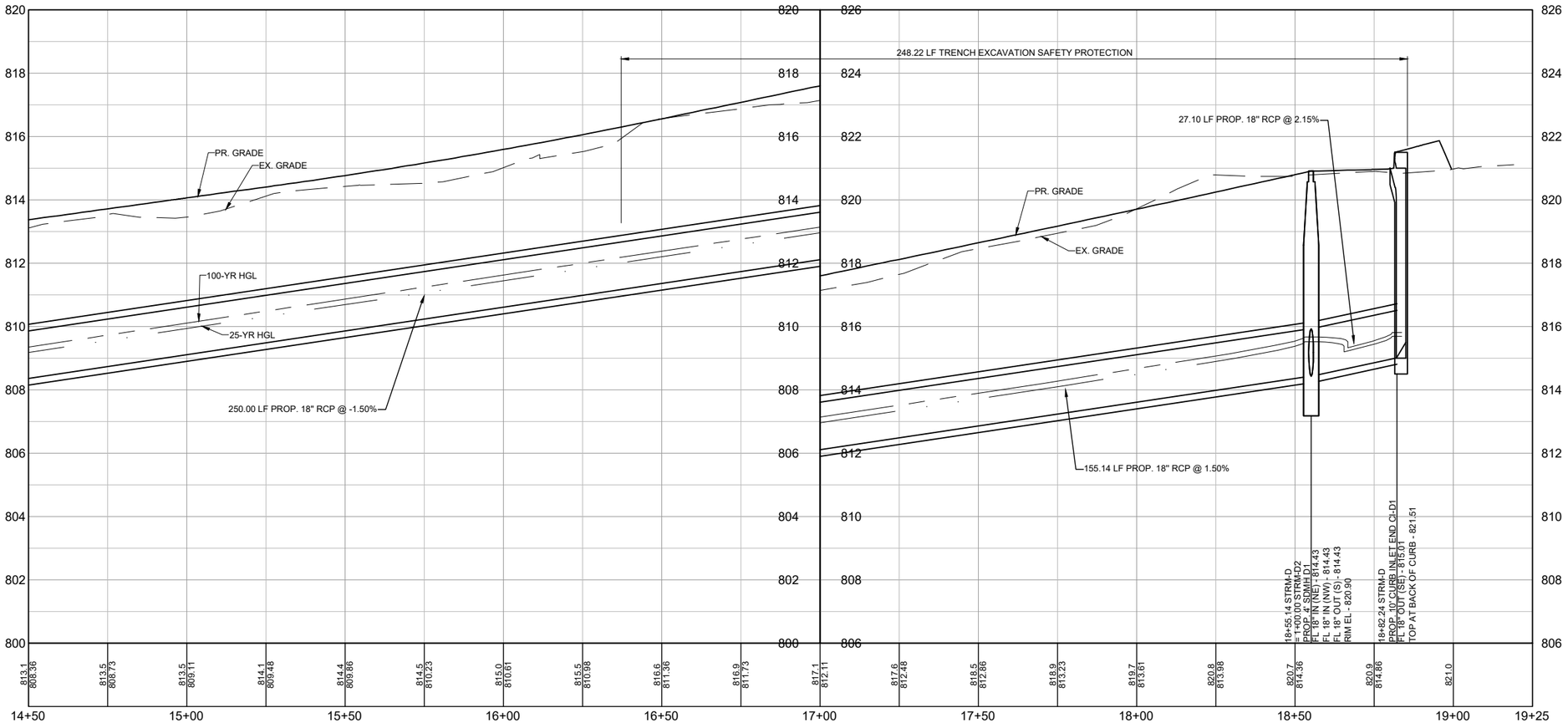
SHEET
SD-200



LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
- IRON FENCE
- WIRE FENCE



STRM-D 14+50 TO 19+25

LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE

1"=40' HORIZ.
1" = 4' VERT.

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN D PLAN AND PROFILE STA. 14+50 TO END

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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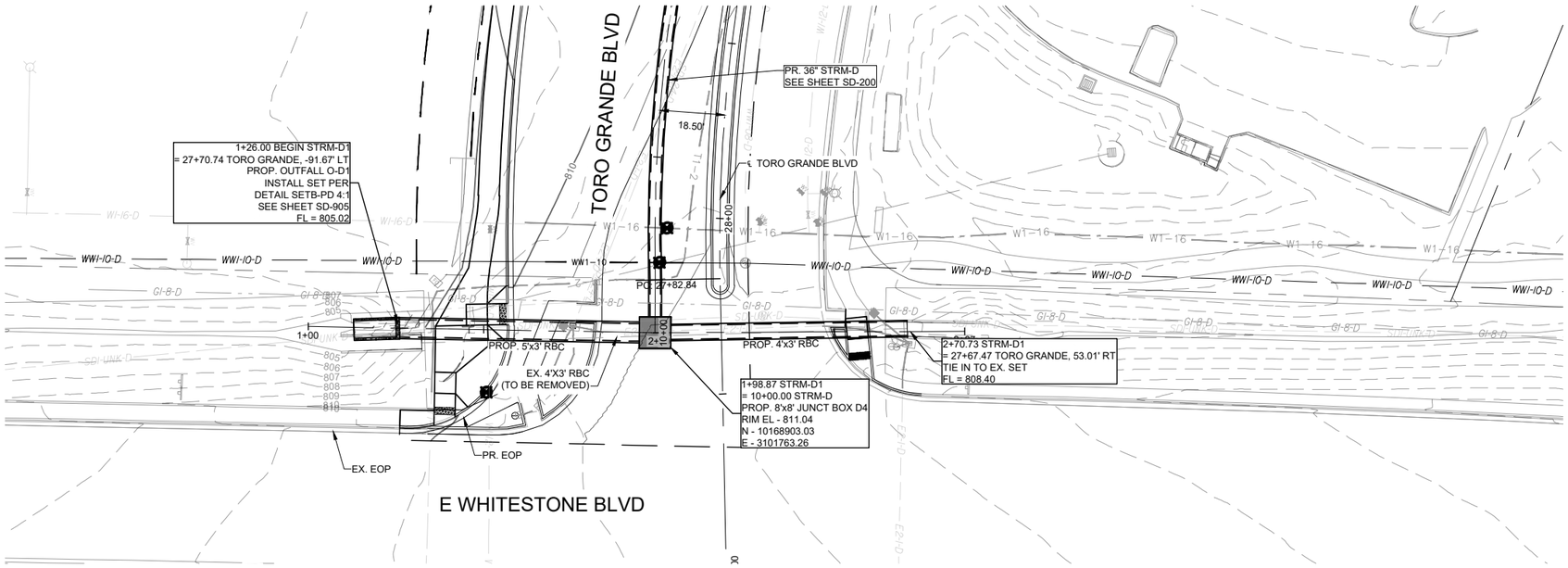
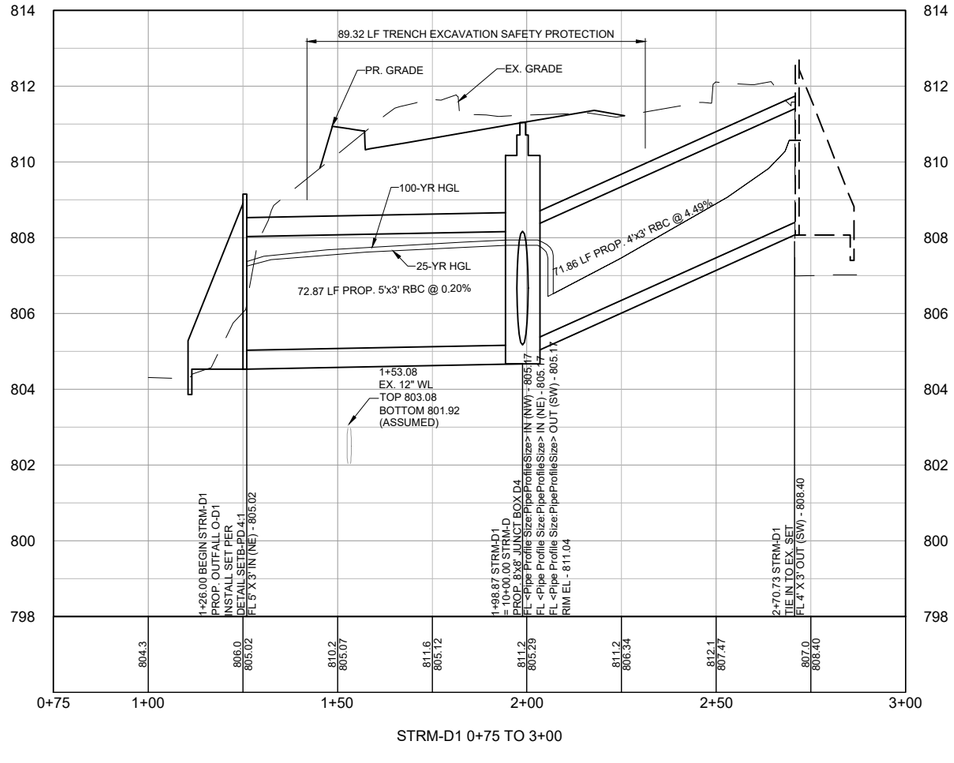
SHEET
SD-201





STRM-D1 0+75 TO 3+00

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
- IRON FENCE
- WIRE FENCE

GENERAL NOTES

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3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.

LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN D1 PLAN AND PROFILE

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

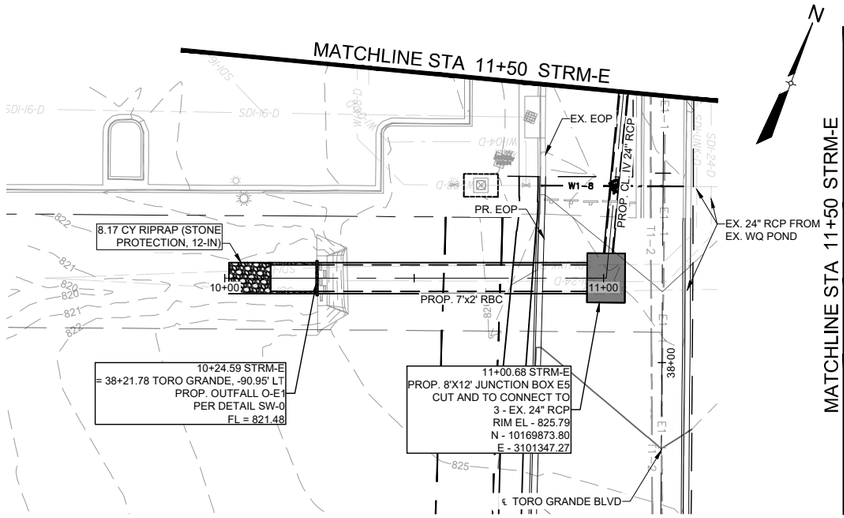
CEDAR PARK

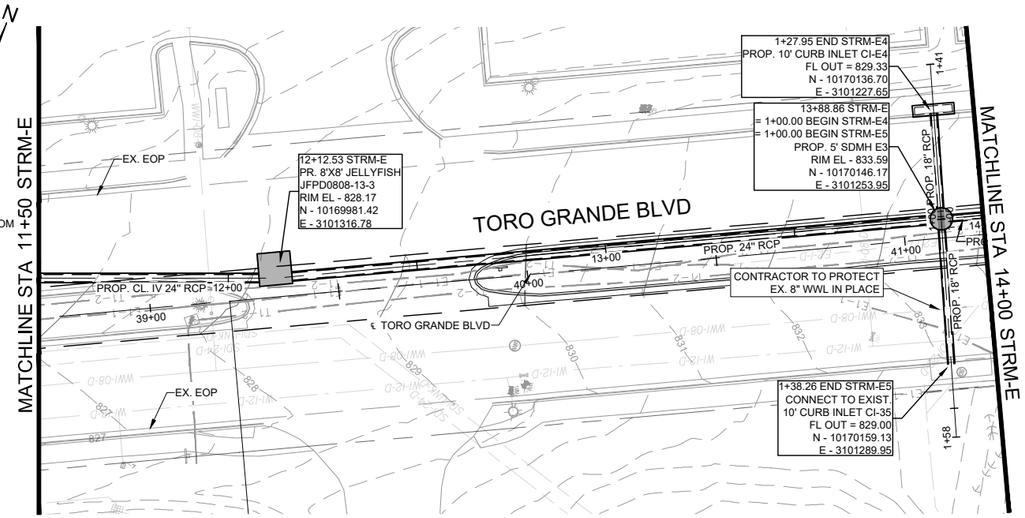
PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
SD-202

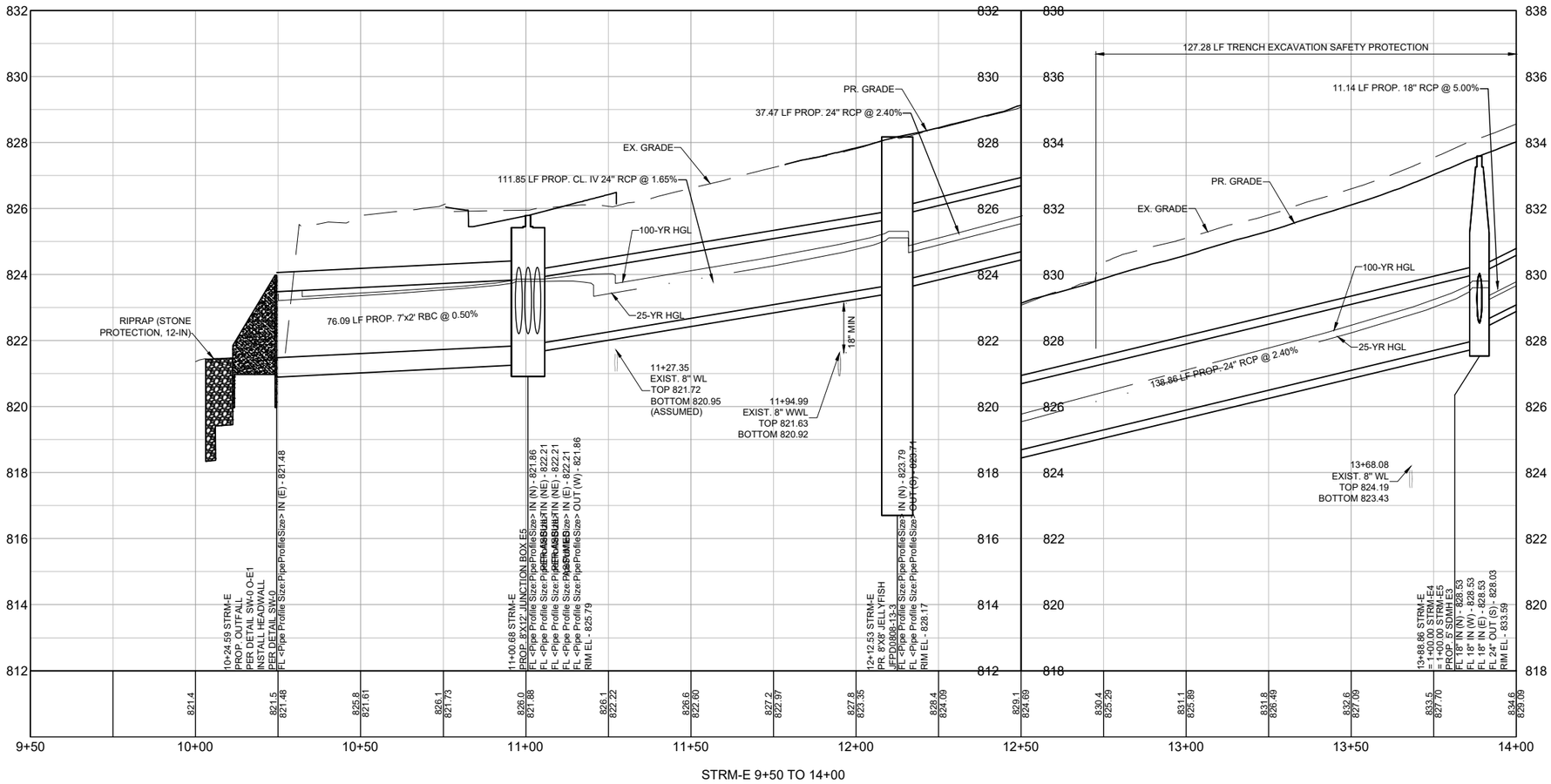




0 20' 40'
SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
- IRON FENCE
- WIRE FENCE



LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE
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1" = 4' VERT.

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CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759-7253
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN E
PLAN AND PROFILE
BEGIN TO STA. 14+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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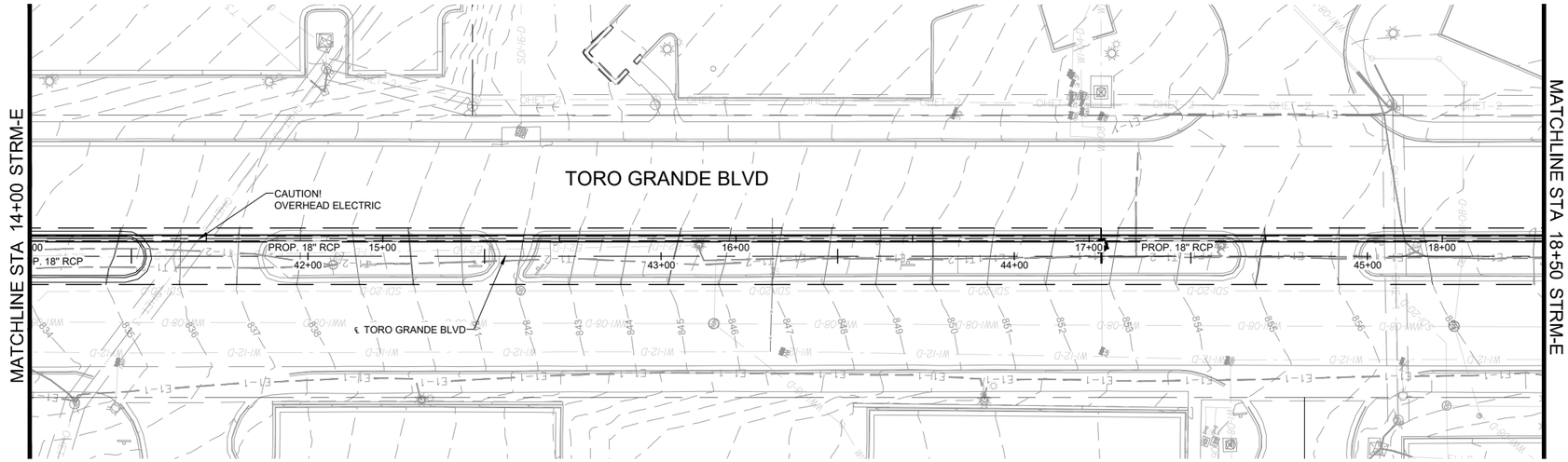
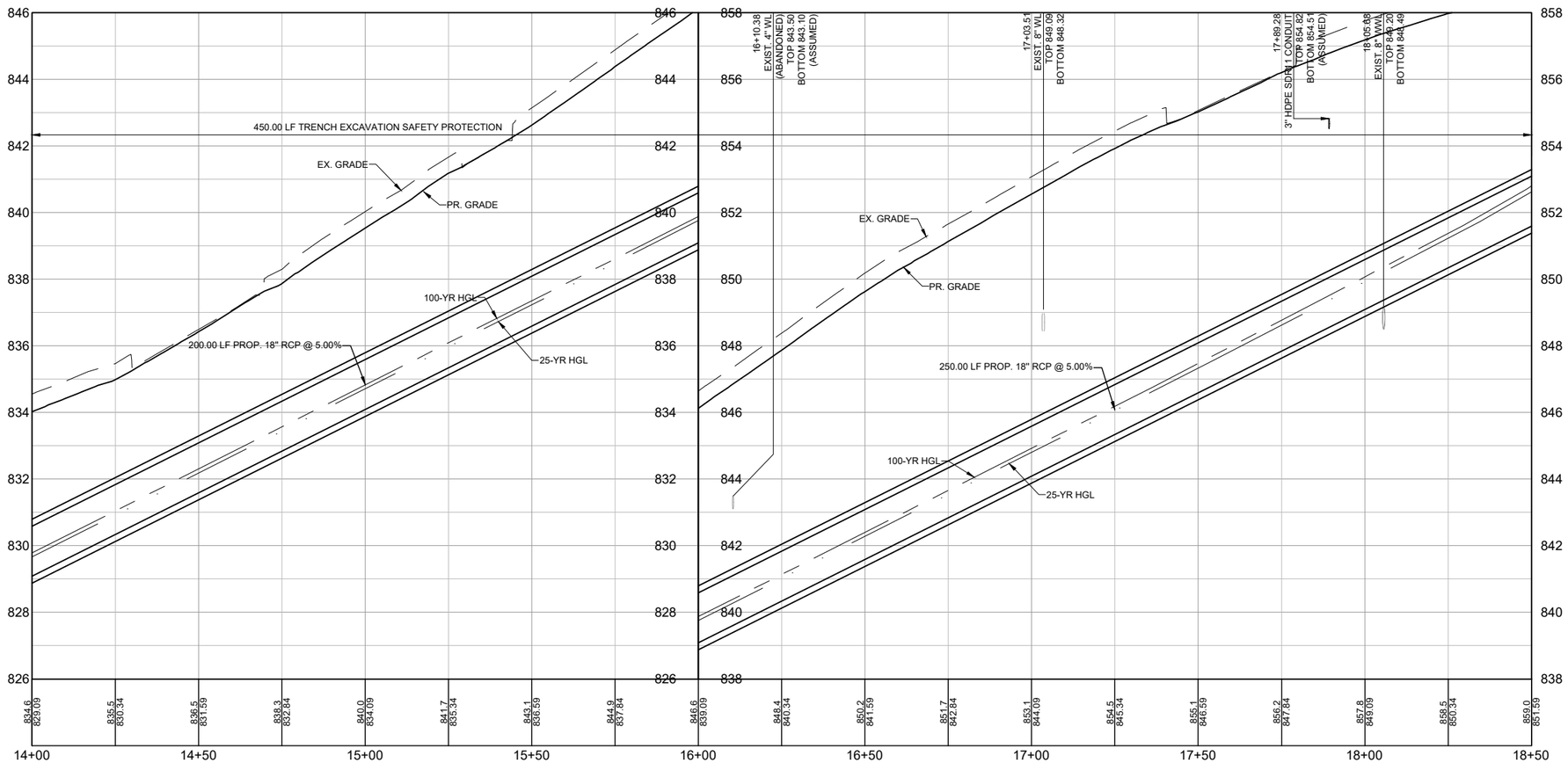
SHEET
SD-203

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-E.dwg – Tab: STORM DRAIN E PLAN AND PROFILE BEGIN TO STA. 14+00 – Plotted: 2/12/2025 8:09 PM By: JAVIER HOLGUIN





LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
- IRON FENCE
- WIRE FENCE

GENERAL NOTES

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LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN E PLAN AND PROFILE STA. 14+00 TO STA. 18+50

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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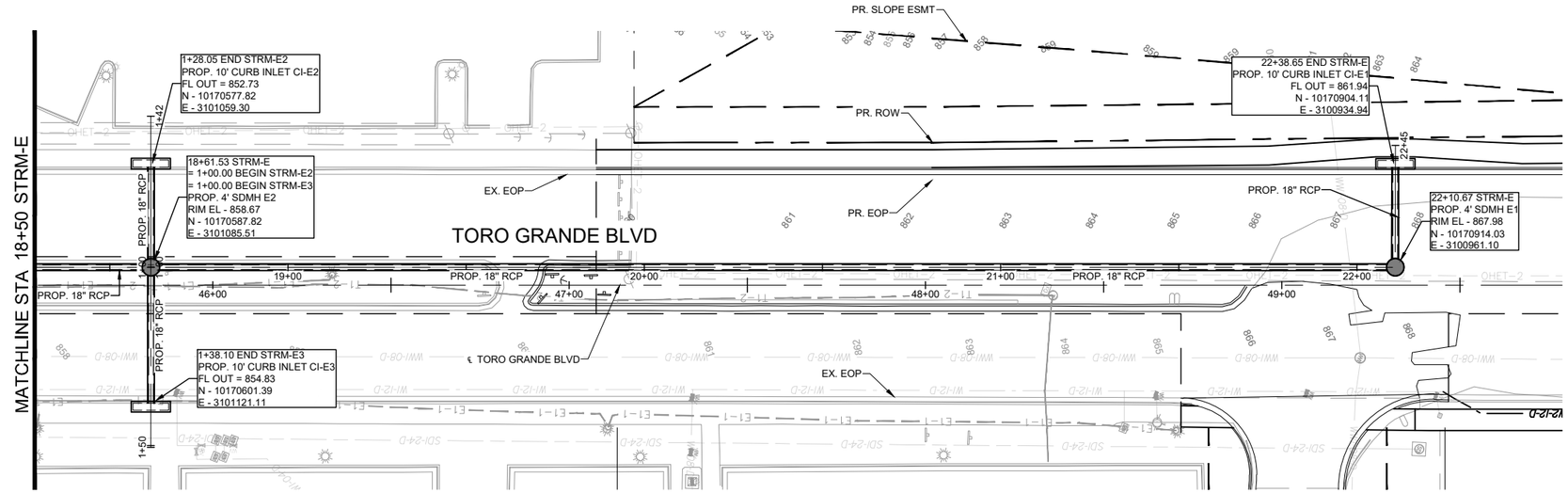
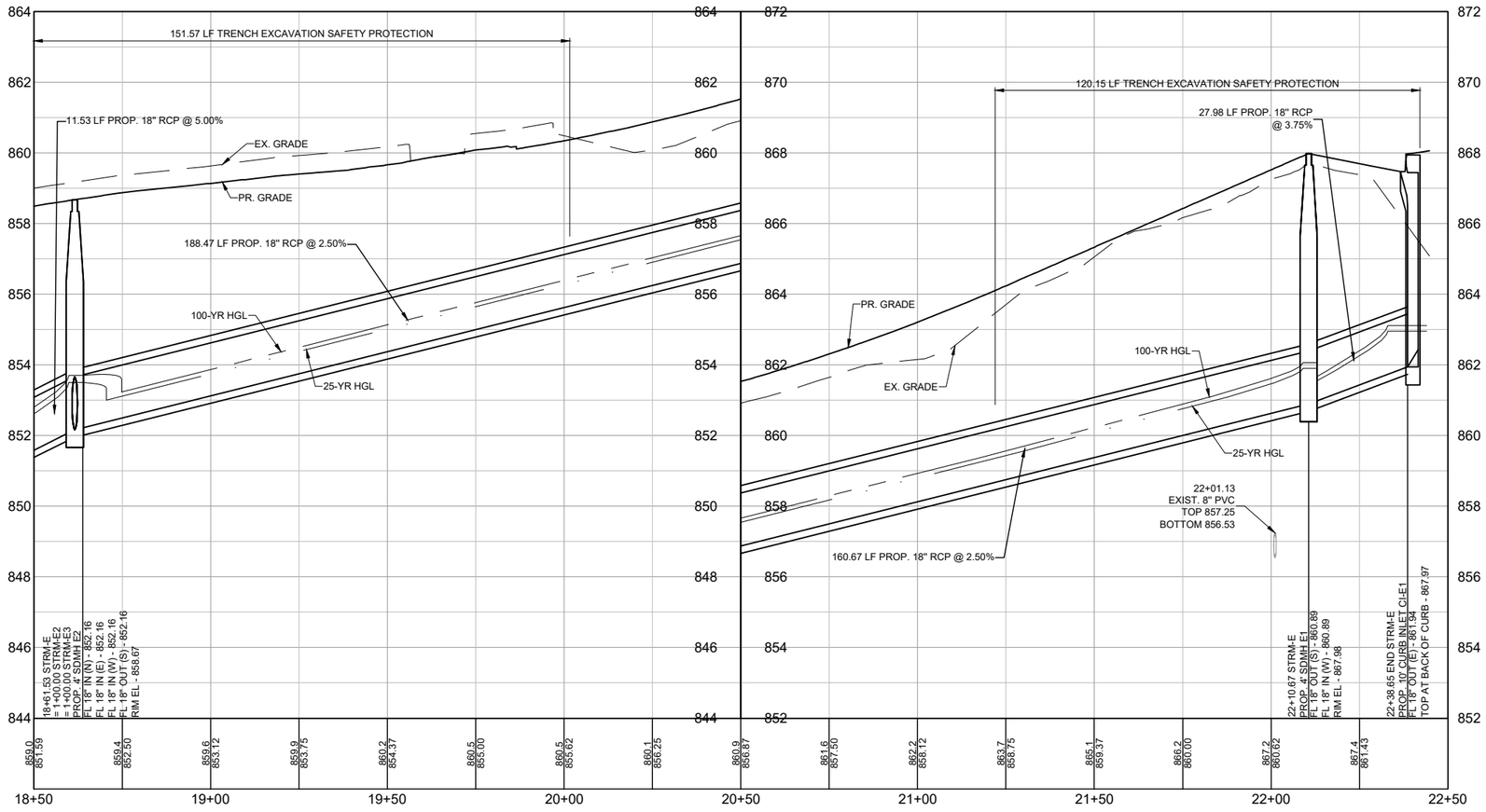
SHEET
SD-204





STRM-E 18+50 TO 22+50

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
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- WIRE FENCE

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LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759 | 512.834.9789
512.834.9781 FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN E PLAN AND PROFILE STA. 18+50 TO END

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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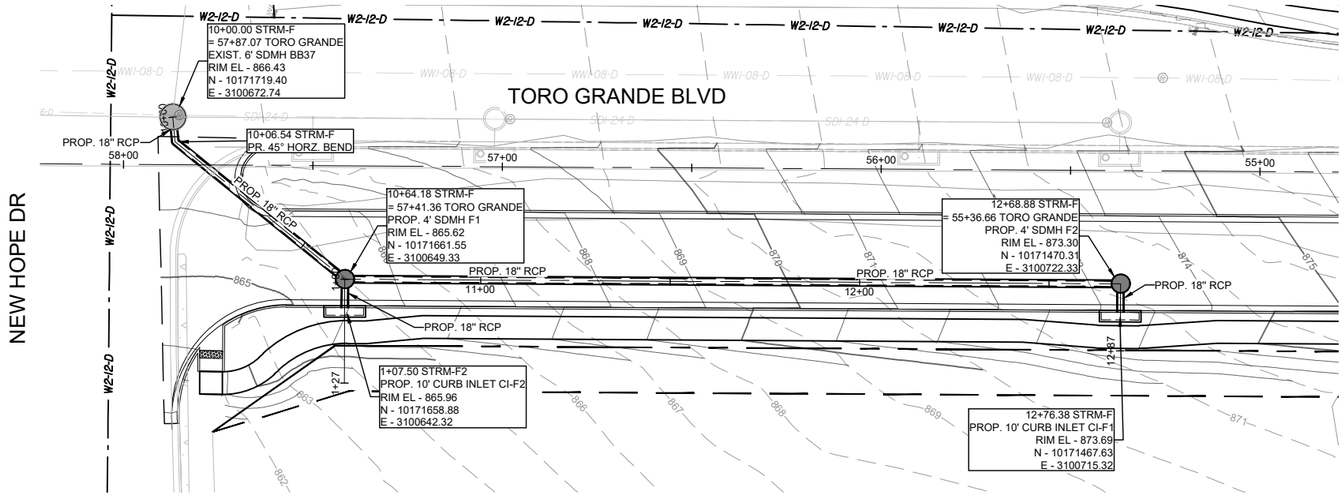
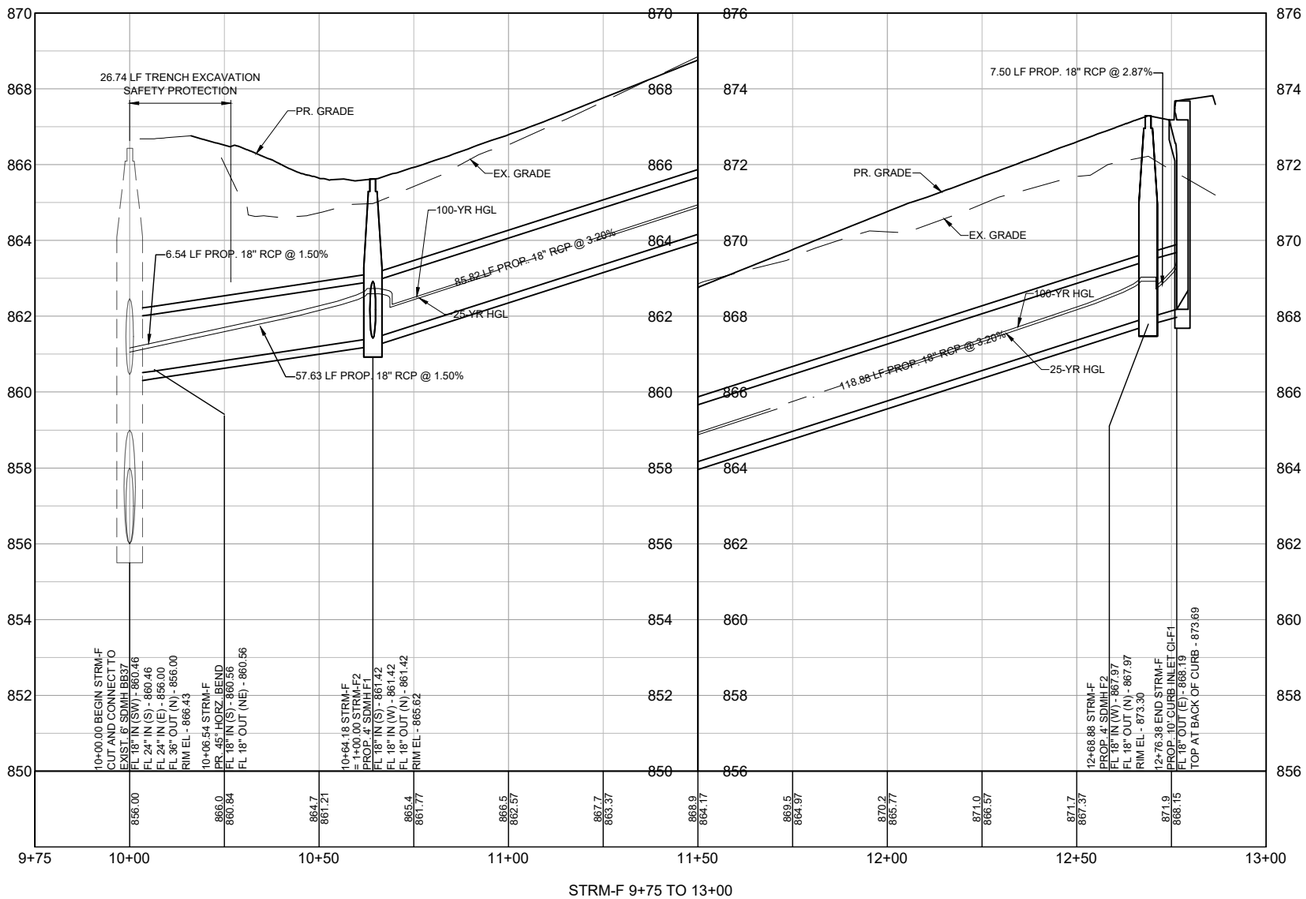
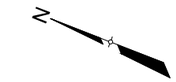
SHEET
SD-205







LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
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LEGEND

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- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY - SUITE 820
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN F PLAN AND PROFILE

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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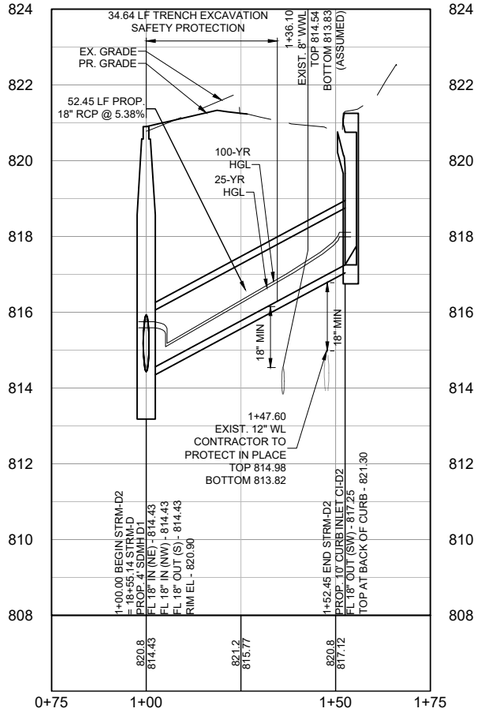
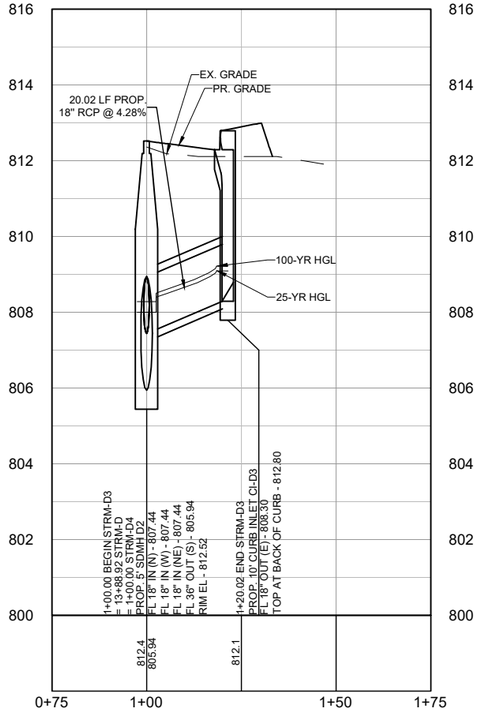
SHEET
SD-206



STRM-D2 0+75 TO 1+75



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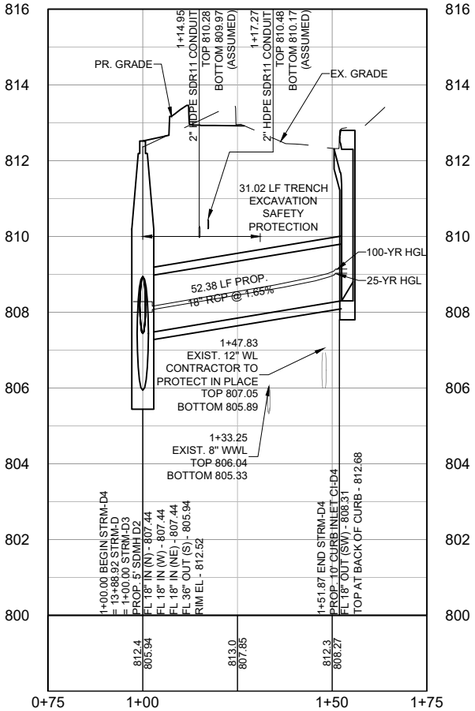

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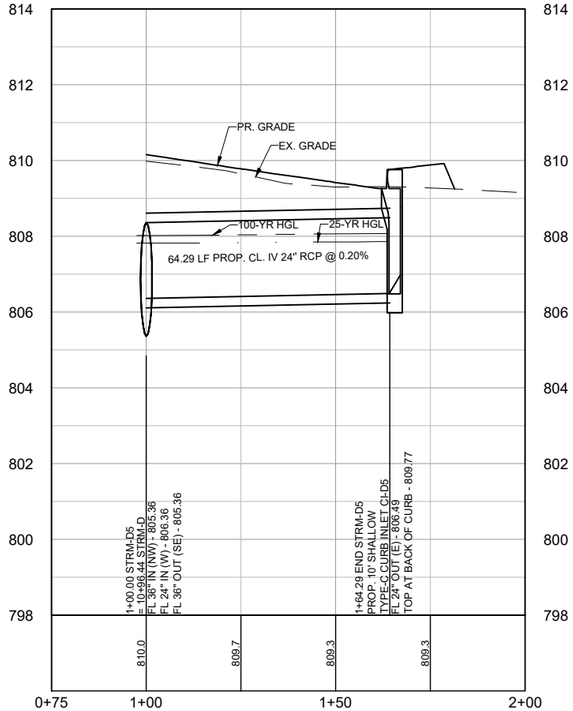
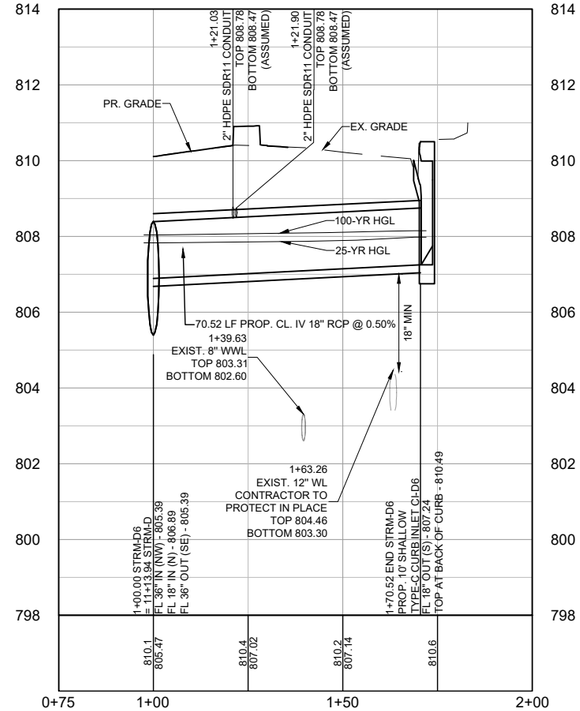
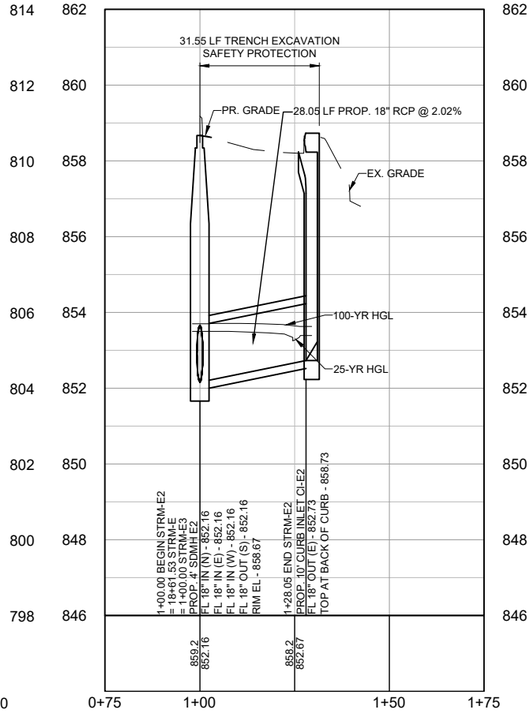


STRM-D5 0+75 TO 2+00



STRM-D6 0+75 TO 2+00



STRM-E2 0+75 TO 1+75

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
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- EX. U.G. FIBER OPTIC
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LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7 / FLOW LINE OF PIPE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY, SUITE 800
AUSTIN, TEXAS 78759 | 512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN LATERALS - NORTH (1 OF 2)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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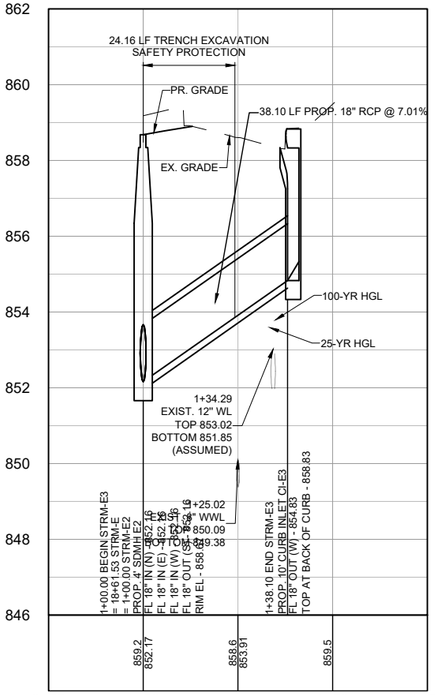
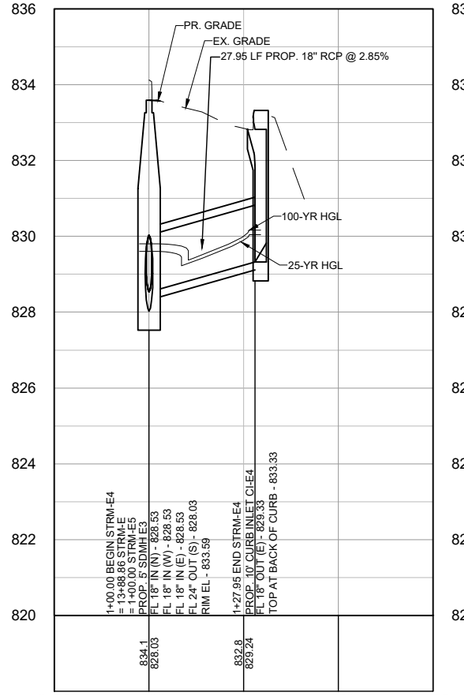
SHEET
SD-300

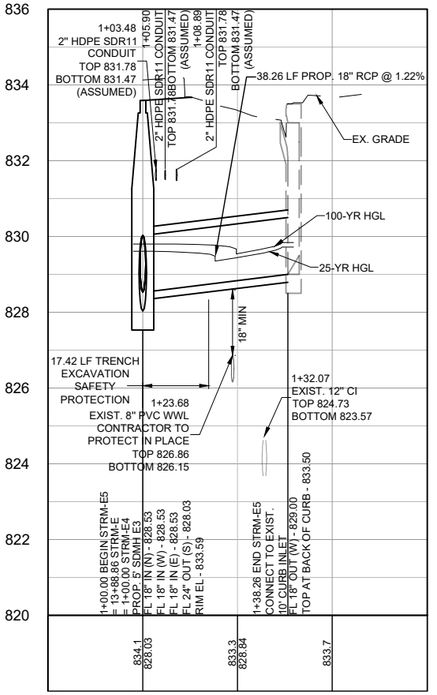
Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-LATS.dwg - Tab: STORM DRAIN LATERALS - NORTH (1 OF 2) - Plotted: 2/12/2025 8:12 PM By: JAVIER HOLGUIN



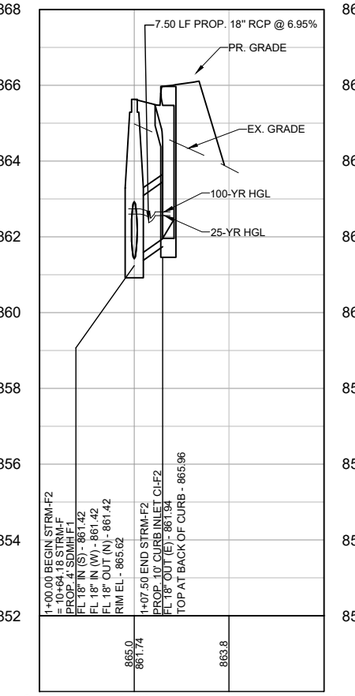
STRM-E3 0+75 TO 1+75



STRM-E4 0+75 TO 1+75



STRM-E5 0+75 TO 1+75



STRM-F2 0+75 TO 1+50

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. DRNG EASEMENT
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- ABAND. WATER
- EX. WATER
- PR. WATER
- ABAND. WASTEWATER
- EX. WASTEWATER
- PR. WASTEWATER
- EX. STORM DRAIN
- PR. STORM DRAIN
- ABAND. GAS LINE
- EX. GAS LINE
- PR. GAS LINE
- EX. U.G. TELECOM
- EX. U.G. FIBER OPTIC
- EX. OVERHEAD ELECTRIC
- PR. OVERHEAD ELECTRIC
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- WIRE FENCE

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.

LEGEND

- EXIST. GRADE
- PROP. GRADE
- 25-YR HGL
- 100-YR HGL

EXISTING GRADE 602.7
FLOW LINE OF PIPE 597.71

PROFILE SCALE
1"=40' HORIZ.
1" = 4' VERT.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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TBPELS ENGINEERING FIRM NO. F-274 , LAND SURVEYING FIRM NO. - 10046701
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STORM DRAIN LATERALS - NORTH (2 OF 2)

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SHEET
SD-301

Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-LATS.dwg - Tab: STORM DRAIN LATERALS (2 OF 2) - Plotted: 2/12/2025 8:13 PM By: JAVIER HOLGUIN

STRM-D QVD											
START STRUCTURE	END STRUCTURE	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)	FULL FLOW CAPACITY (CFS)	25-YR FLOW (CFS)	25-YR VELOCITY (FT/S)	25-YR DEPTH (FT)	100-YR FLOW (CFS)	100-YR VELOCITY (FT/S)	100-YR DEPTH (FT)
MH-D1	CI-D1	18	27.10	1.80	13.98	4.01	6.83	0.55	5.32	7.38	0.64
CI-D2	MH-D1	18	52.50	5.20	23.96	3.75	9.88	0.40	4.98	10.70	0.46
MH-D1	MH-D2	18	466.20	1.50	12.86	7.74	7.61	0.84	10.27	8.08	1.01
MH-D2	CI-D3	18	20.00	2.30	16.09	4.31	7.72	0.53	5.72	8.33	0.62
CI-D4	MH-D2	18	52.40	1.50	12.82	3.56	6.21	0.54	4.72	6.70	0.63
MH-D2	WYE	36	275.00	0.20	30.1	15.18	4.27	1.51	20.20	4.56	1.80
CI-D6	WYE	18	70.50	0.50	7.4	3.42	4.11	0.72	4.54	4.40	0.85
WYE	WYE	36	17.50	0.20	27.62	17.57	4.14	1.74	23.47	4.39	2.12
WYE	CI-D5	24	62.30	0.20	10.33	5.42	3.33	1.03	7.19	3.55	1.23
WYE	SC-D	36.00	81.50	0.20	29.55	22.39	4.60	1.95	29.90	4.76	2.49
SC-D	MH-D4	36.00	15.00	0.20	29.85	22.09	4.62	1.92	29.53	4.81	2.43
EX. SET	MH-D4	4'X3'	71.90	4.50	262.4	72.27	18.36	0.98	72.27	18.36	0.98
MH-D4	O-D1	5'X3'	72.90	0.20	74.51	94.31	6.29	2.97	101.73	6.78	3.00

STRM-E QVD											
START STRUCTURE	END STRUCTURE	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)	FULL FLOW CAPACITY (CFS)	25-YR FLOW (CFS)	25-YR VELOCITY (FT/S)	25-YR DEPTH (FT)	100-YR FLOW (CFS)	100-YR VELOCITY (FT/S)	100-YR DEPTH (FT)
CI-E1	MH-E1	18	27.50	3.80	20.53	6.88	10.47	0.6	9.13	11.28	0.7
MH-E1	MH-E2	18	349.10	2.50	16.61	6.88	8.96	0.67	9.13	9.62	0.79
CI-E2	MH-E2	18	28.10	2.00	14.97	2.98	6.61	0.45	3.96	7.15	0.53
MH-E2	CI-E3	18	38.10	1.80	13.93	5.81	7.52	0.68	7.71	8.08	0.80
MH-E2	MH-E3	24	472.70	5.00	50.58	13.84	13.72	0.72	18.40	14.82	0.83
CI-E4	MH-E3	18	28.00	2.90	17.77	3.56	7.85	0.46	4.72	8.50	0.53
MH-E3	CI-E5	18	38.30	1.20	11.64	3.59	5.80	0.57	4.76	6.26	0.67
MH-E3	JFPD0808	24	176.30	2.40	35.08	19.22	11.42	1.06	25.58	12.19	1.27
JFPD0808	MH-E5	24	111.90	1.65	29.09	19.05	9.87	1.18	25.37	10.44	1.45
MH-E5	O-E1	7'X2'	76.10	0.50	95.64	106.92	7.64	1.72	113.21	8.09	1.79

STRM-F QVD											
START STRUCTURE	END STRUCTURE	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)	FULL FLOW CAPACITY (CFS)	25-YR FLOW (CFS)	25-YR VELOCITY (FT/S)	25-YR DEPTH (FT)	100-YR FLOW (CFS)	100-YR VELOCITY (FT/S)	100-YR DEPTH (FT)
CI-F1	MH-F2	18	7.50	5.30	24.26	2.82	9.18	0.35	3.75	9.96	0.40
MH-F2	MH-F1	18	204.70	3.20	18.79	2.82	7.65	0.39	3.75	8.30	0.45
MH-F1	CI-F2	18	7.50	2.70	17.15	2.67	7.06	0.40	3.54	7.65	0.46
MH-F1	EX. MH-BB37	18.00	64.20	2.00	14.83	4.96	7.56	0.60	6.60	8.15	0.70

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QVD CALCULATIONS - NORTH

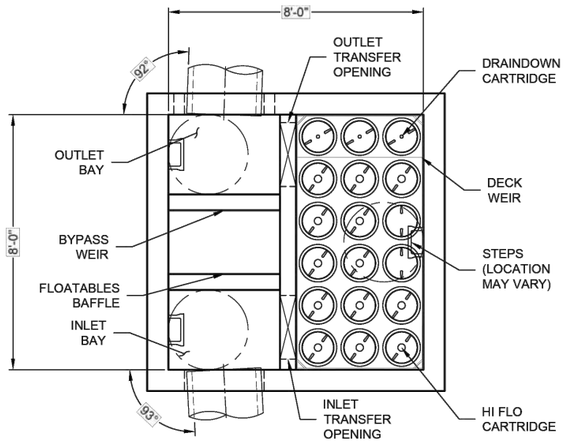
TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: B. GUINN
DRAWN: B. GUINN
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
SD-302



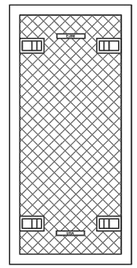
PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089
MAX. TREATMENT (CFS)	2.94
DECK TO INSIDE TOP (MIN) (B)	5.00



24"
TRENCH COVER
(LENGTH VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQU
WATER QUALITY FLOW RATE (cfs)	2.50
PEAK FLOW RATE (cfs)	18.2
RETURN PERIOD OF PEAK FLOW (yrs)	25
# OF CARTRIDGES REQUIRED (HF / DD)	13 / 3
CARTRIDGE LENGTH	54"

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	823.79'	RCP	24"	*	*
INLET #2	*	*	*	*	*
OUTLET	823.71'	RCP	24"	*	*

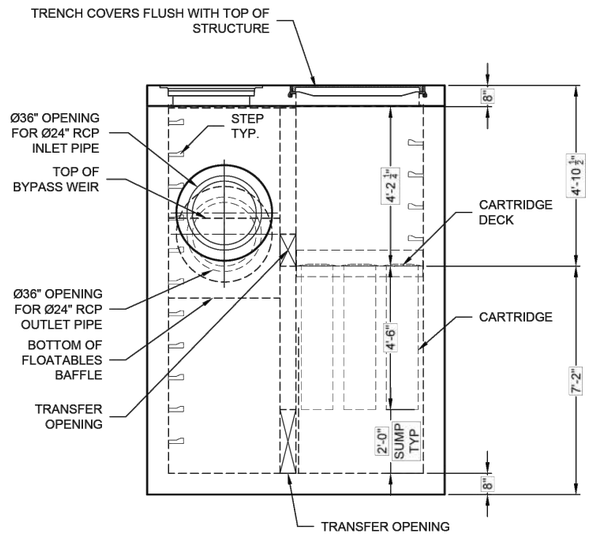
SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	828.17'

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD



ELEVATION VIEW

RIM
ELEV. = 828.17'

TOP OF STRUCTURE
ELEV. =828.17'

WEIR ELEV. = 825.04'

INLET INV. ELEV. = 823.79'

OUTLET INV. ELEV. = 823.71'

STRUCTURE INV.
ELEV. = 817.04'

BOTTOM OF STRUCTURE
ELEV. = 816.37'

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish® Filter
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

CONTECH®
ENGINEERED SOLUTIONS LLC
www.ContechES.com
9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0808 - 810599 - 015
TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TX
SITE DESIGNATION: STRM-E

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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JELLYFISH WATER QUALITY UNIT DETAILS

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SD-303

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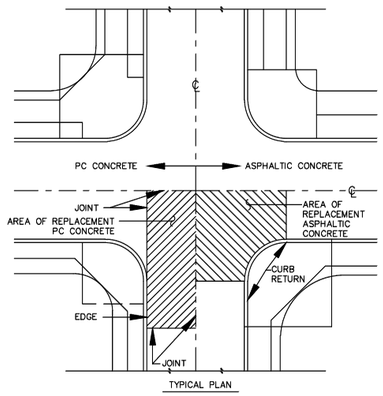


TYPICAL PLAN

TRENCH REPAIRS WITHIN PORTLAND CEMENT CONCRETE PAVEMENTS NOTE:

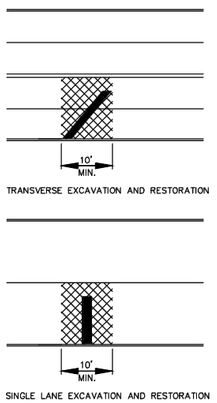
1. IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, THEN THE ENTIRE CONCRETE SLAB FROM JOINT TO JOINT AND JOINT TO EDGE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE DIRECTOR.

TRENCH REPAIRS WITHIN ASPHALTIC CONCRETE PAVEMENTS NOTES:

1. IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, DEFINED FROM CURB RETURN TO CURB RETURN, THE ENTIRE QUADRANT OF THE EXISTING SURFACE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. A QUADRANT IS DEFINED AS THE CROSS-HATCHED AREA IN THE ABOVE DETAIL.

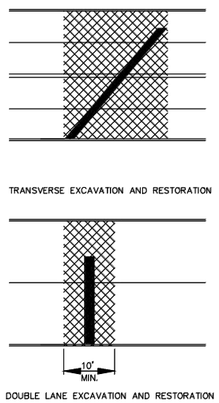
1 TYPICAL RESTORATION FOR EXCAVATION IN INTERSECTIONS

SCALE: NOT TO SCALE



TRANSVERSE EXCAVATION AND RESTORATION

SINGLE LANE EXCAVATION AND RESTORATION



TRANSVERSE EXCAVATION AND RESTORATION

DOUBLE LANE EXCAVATION AND RESTORATION

NOTES:

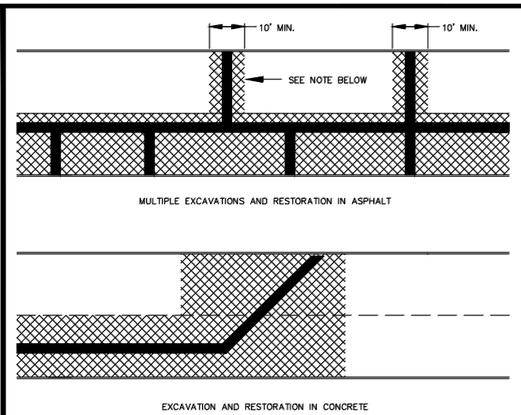
1. PROJECTS THAT DO NOT HAVE AN ACCEPTABLE STREET REPAIR, APPROVED BY PUBLIC WORKS, WILL NOT RECEIVE A WATER METER UNTIL CORRECTED. CONTACT CONSTRUCTION INSPECTOR / ENGINEERING CONTACT FOR DETAILS.
2. IN ASPHALT, RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED.

AREA OF EXCAVATION

LIMITS OF RESTORATION

2 TYPICAL RESTORATION FOR EXCAVATION IN STREETS

SCALE: NOT TO SCALE



MULTIPLE EXCAVATIONS AND RESTORATION IN ASPHALT

EXCAVATION AND RESTORATION IN CONCRETE

NOTES:

1. ACTUAL RESTORATION LIMITS ARE DETERMINED BY JOINT LOCATIONS. IN ASPHALT, RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED.
2. IN ASPHALT, RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED.

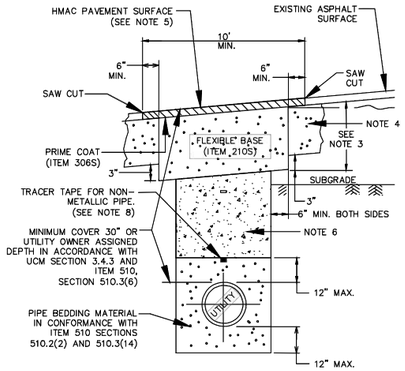
AREA OF EXCAVATION

LIMITS OF RESTORATION

3 TYPICAL RESTORATION FOR EXCAVATION IN STREETS

SCALE: NOT TO SCALE

FOR PARKING LOTS AND PRIVATE PROPERTY ONLY



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3", BUT IN NO CASE LESS THAN 12".
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL MATCH EXISTING BUT NOT LESS THAN 2"
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S). CRACK SEAL SAW-CUT LINES
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" BELOW THE SUBGRADE, OR A MINIMUM OF 18" BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

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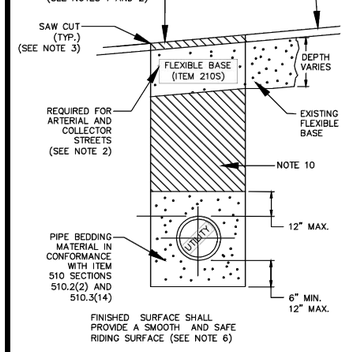
4 TRENCH REPAIR IN ASPHALTIC SURFACE OVER FLEXIBLE BASE (UCM SECTION 5.8.0)

SCALE: NOT TO SCALE



FINISHED SURFACE SHALL PROVIDE A SMOOTH AND SAFE RIDING SURFACE (SEE NOTE 6)

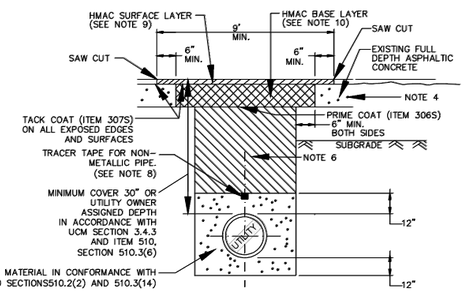
NOTES:

1. TEMPORARY PAVEMENT REPAIRS SHALL BE ALLOWED NO LONGER THAN 90 DAYS AFTER PASSING THE WATER PRESSURE AND/OR WASTEWATER MANDREL TESTS. IF TEMPORARY PAVEMENT REPAIRS ARE TO REMAIN IN PLACE FOR A PERIOD EXCEEDING 90 DAYS, ON ANY SINGLE TRENCH LINE OR INDIVIDUAL STREET, SUCH TEMPORARY PAVEMENT SHALL BE HMAC, PLACED AND COMPACTED SUFFICIENTLY TO WITHSTAND THE ANTICIPATED TRAFFIC LOADS OVER THE DURATION OF THE TEMPORARY REPAIR.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE USING COLD MIX AC IN ACCORDANCE WITH TXDOT "DMS-9203, RAPID CURING ASPHALT CONCRETE PATCHING MATERIAL" OR TEMPORARY HMAC PER COA ITEM "340S HOT MIX ASPHALTIC CONCRETE PAVEMENT". A MINIMUM OF TWO INCHES (2") OF TEMPORARY COLD MIX OR HMAC SHALL BE PLACED OVER COMPACTED BACKFILL. FLEXIBLE BASE SHALL ALSO BE REQUIRED, FOR ALL COLLECTOR OR ARTERIAL STREETS.
3. THE EXISTING CONCRETE OR ASPHALT PAVING SURFACE SHALL BE SAW CUT. SAW CUTS SHALL BE IN A STRAIGHT LINE, ALONG THE SIDES OF THE TRENCH (OR MANHOLE EXCAVATION) AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION. ANY DAMAGED EDGES SHALL BE RE-SAW CUT IF REQUIRED BY THE OWNER.
4. HMAC OR COLD MIX SHALL BE FREE OF CONTAMINATION, AS DETERMINED BY A VISUAL INSPECTION BY THE OWNER'S REPRESENTATIVE, REFERENCE ITEM 340S SECTION 340S.10 A.
5. TEMPORARY PAVING MATERIAL MUST BE COMPACTED WITH A SMOOTH DRUM VIBRATORY ROLLER.
6. THE FINISHED SURFACE SHALL BE MAINTAINED DUST FREE AND PROVIDE A SMOOTH AND SAFE RIDING SURFACE FOR ALL VEHICLES ALONG THE ROUTE, INCLUDING, BUT NOT LIMITED TO SMALL CARS, MOTORCYCLES, MOPEDS AND BICYCLES. THE TEMPORARY SURFACE SHALL BE MAINTAINED BY THE CONTRACTOR THE ENTIRE TIME THE TEMPORARY SURFACE IS IN PLACE. DAILY MAINTENANCE SHALL BE PERFORMED BASED ON FIELD CONDITIONS AND AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE, UNTIL THE FINAL PAVEMENT SURFACE IS PLACED.
7. THE TEMPORARY PAVEMENT SURFACE SHALL HAVE A MAXIMUM ALLOWABLE DEVIATION OF ¼" ABOVE OR BELOW THE EXISTING PAVEMENT SURFACE DIRECTLY ADJACENT TO THE PATCH.
8. ANY PORTIONS OF THE TEMPORARY PAVEMENT SURFACE THAT HAVE SETTLED, BECOME DAMAGED, OR DETERIORATED MUST BE REPAIRED BY REMOVING THE EXISTING TEMPORARY SURFACE MATERIAL TO A MINIMUM DEPTH OF 2" BELOW THE SURFACE ELEVATION PRIOR TO REPLACING AND RECOMPACTING NEW COLD MIX/HOT MIX IN THE EXCAVATION AREA.
9. IF IT IS DETERMINED DURING CORRECTIVE ACTION THAT SOFT, SATURATED AND/OR UNSTABLE SUBSURFACE SOILS ARE CONTRIBUTING TO THE FAILURE OF THE TEMPORARY PAVEMENT SECTION, THE UNSUITABLE MATERIALS MUST BE REMOVED AND REPLACED WITH BACKFILL SOILS FREE OF ORGANICS, STONES OR ROCKS OVER 8 INCHES, AND HAVING A PLASTICITY INDEX OF 20 OR LESS, AND SHALL HAVE A MC WITHIN 2% OF OPTIMUM, PRIOR TO REPLACING THE TEMPORARY PAVEMENT SURFACE.
10. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
11. ALL EXISTING ROADWAY STRIPING AND PAVEMENT MARKINGS REMOVED OR DAMAGED BY THE CONTRACTOR'S WORK SHALL BE RESTORED PRIOR TO OPENING THE STREET TO TRAFFIC.
12. TEMPORARY TRENCH REPAIR OPEN TO THE PUBLIC IS LIMITED TO 14 DAYS.

5 TEMPORARY TRENCH REPAIR IN ASPHALTIC SURFACE ITEM 510 SECTION 510.3 (25)(h)

SCALE: NOT TO SCALE

FOR PUBLIC ROADS



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3", BUT IN NO CASE LESS THAN 12".
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL MATCH EXISTING BUT NOT LESS THAN 2"
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S).
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" BELOW THE SUBGRADE, OR A MINIMUM OF 18" BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.
9. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
10. THE COMBINED THICKNESS OF THE REPLACEMENT AC SURFACE AND BASE LAYERS SHALL MATCH THE THICKNESS OF EXISTING FULL DEPTH AC LAYER. HOWEVER, THE REPLACEMENT AC BASE LAYER SHALL BE A MINIMUM THICKNESS OF 6" OF TYPE A OR B HMA. A BASE LAYER TYPE THAT MATCHES THE NEW HMA SURFACE LAYER (SEE NOTE 1) MAY BE USED, IF THE TOTAL REPAIR AREA IS LESS THAN 300 SQUARE YARDS.
11. SEE PAVEMENT RESTORATION DETAIL 2 FOR LIMITS OF RESTORATION. SEE DETAIL 1 IF IN INTERSECTION. CRACK SEAL SAW-CUT LINES.

6 REPAIR OF FULL DEPTH ASPHALTIC CONCRETE (UCM SECTION 5.5.13) FOR PUBLIC ROADS

SCALE: NOT TO SCALE

CITY OF CEDAR PARK

DEPARTMENT OF PUBLIC WORKS

VER: 200918

TEMPORARY AND FINAL REPAIR OF STREETS AND PUBLIC TRAFFIC AREAS

SHEET 1 OF 1

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046705
9000 N. MOPAC EXPRESSWAY - SUITE 100
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN STANDARD DETAILS

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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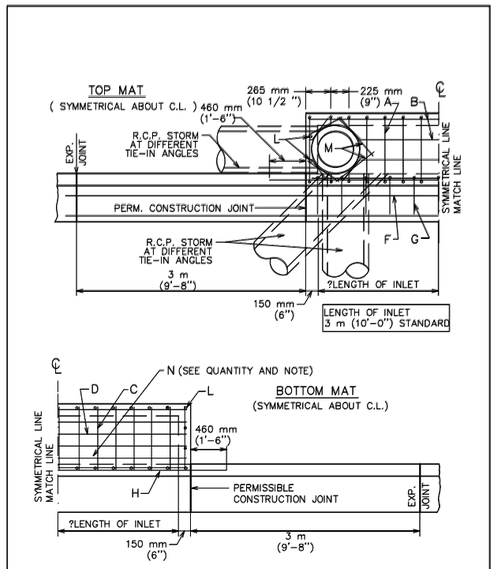
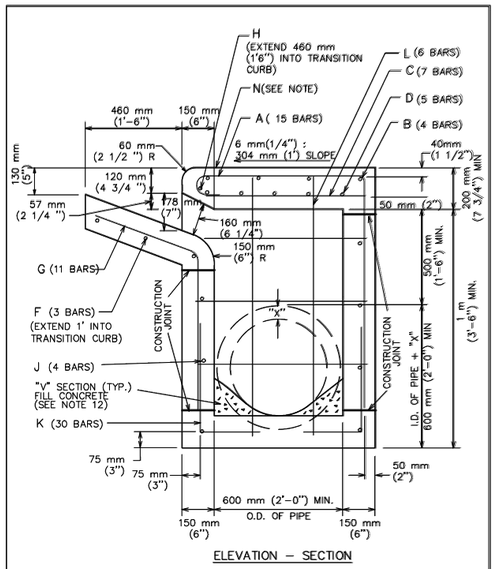
SD-901



NOTE: INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER

CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS		TYPICAL DETAILS FOR CURB INLET	
	12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1 OF 4



ELEVATION – SECTION

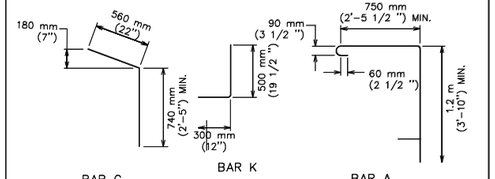
NOTE: INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER

CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS		TYPICAL DETAILS FOR CURB INLET	
	12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 2 OF 4

TABLE OF QUANTITIES
FOR 18" OUTLET PIPE
REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	230mm (9")*	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	29
C	4	460 mm (18")	7	760 mm (2'-6")	12
D	6	150 mm (6")	5	3.25 m (10'-8")	80
E	4	300 mm (12")	6	760 mm (2'-6")	10
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	11	1.25 m (4'-3")	31
H	6	–	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	3.25 m (10'-8")	50
K	4	230 mm (9")*	30	800 mm (2'-7 1/2")	52
L	4	300 mm (12")*	6	1.3 m (4'-4")	17
M	4	–	4	500 mm (1'-8") AVG	4
N	ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER MODEL SD-SP, SQUARE HOLE OPTION, SYMBOL: FISH, COLOR: BLUE. USE ALMETEK SPECS FOR THEFT RESISTANT RIVET SURFACE MOUNT W/ ADHESIVE FOR DRY CONCRETE INSTALLATION.				
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06

* EXCEPT AS SHOWN ON PLAN



CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS		TYPICAL DETAILS FOR CURB INLET	
	12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 3 OF 4

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A"
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (380 mm or 15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND COVER.
7. CHAMFER ALL EXPOSED EDGES 20 mm (3/4 ").
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION.
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
14. INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATER" MARKER, MODEL SD-SP, SQUARE OPTION, SYMBOL: FISH, COLOR: BLUE. USE ALMETEK INSTALL SPECIFICATIONS FOR THEFT RESISTANT RIVET SURFACE MOUNT W/ADHESIVE FOR DRY CONCRETE INSTALL.

REFERENCES:

FOR EXPANSION JOINT DOWEL AND DOWEL LOCATION DETAILS SEE STD. 430S-3, "CURB EXPANSION JOINT DOWEL DETAIL".

FOR 18" MANHOLE FRAME AND COVER DETAILS SEE STD. 503S-1, "18" COVER AND FRAME".

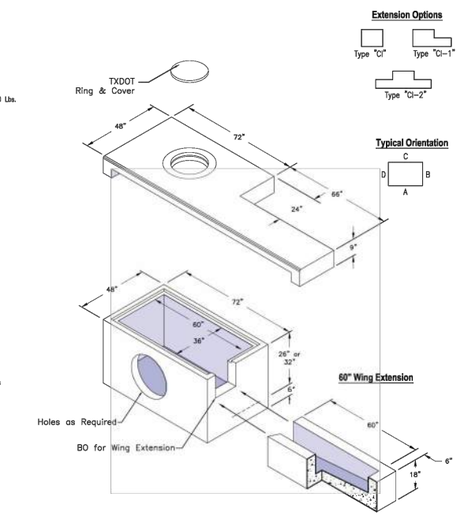
ALMETEK "NO DUMPING DRAINS TO WATERWAY" MARKERS WWW.ALMETEK.COM

CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS		TYPICAL DETAILS FOR CURB INLET	
	12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 4 OF 4

Oldcastle Precast

Water

36" x 60" Shallow Type "C" Inlet W/1 Ext
Model: 3660-SHC1-INLET



GENERAL NOTES:
1. Bedding Shall be in Accordance With TXDOT Plans & Specifications.

Texas Region

For more information about our products please visit us on the web at: oldcastleprecast.com
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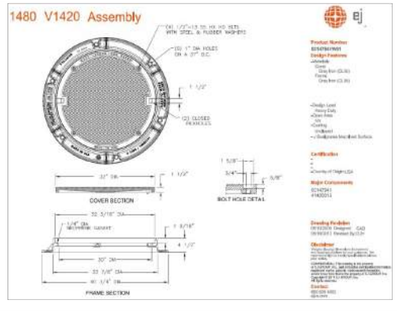
888-9 Oldcastle (888-965-3227)

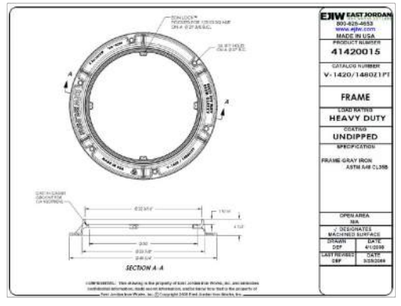
1480 V1420 Assembly



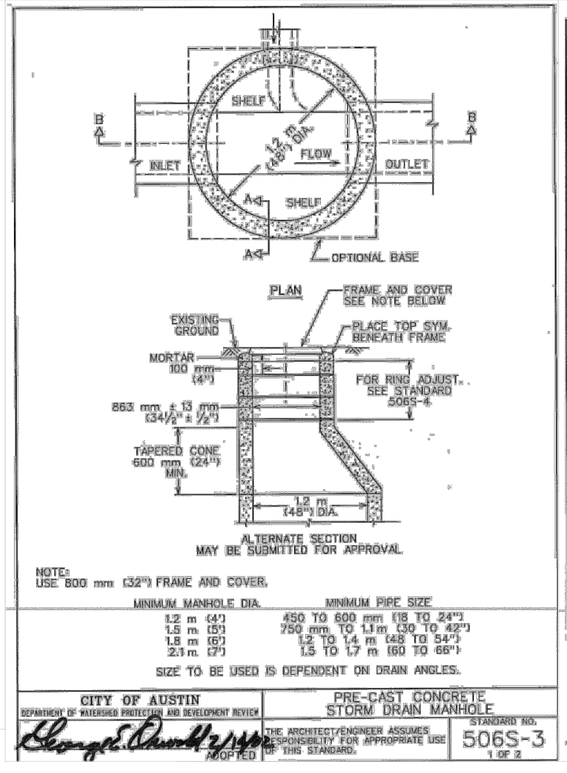
Notes:

Product shall be East Jordan Iron Works V-1420, Product Number 00147941W01, or approved equal.

All Manhole covers shall read "CITY OF CEDAR PARK" and "SANITARY SEWER" or "STORM SEWER", whichever is appropriate.



CITY OF CEDAR PARK ENGINEERING DEPARTMENT		MANHOLE RING AND COVER OUTSIDE OF PAVED AREAS	
DARWIN MARCHELL APPROVED	09/02/16 DATE	ADOPTED: 09/02/2016 SCALE: N.T.S. INITIAL:	1 OF 1

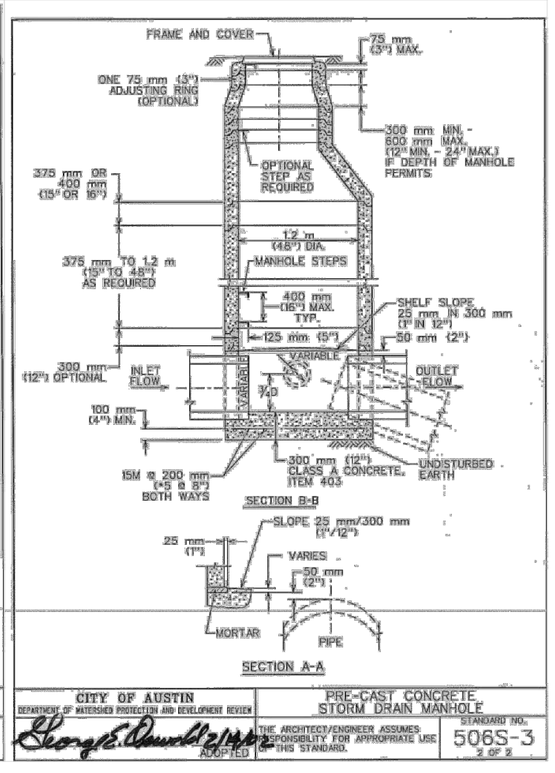


NOTE:
USE 800 mm (32") FRAME AND COVER.

MINIMUM MANHOLE DIA.	MINIMUM PIPE SIZE
1.2 m (4')	450 TO 600 mm (18 TO 24")
1.5 m. (5')	750 mm TO 1.1 m (30 TO 42")
1.8 m (6')	1.2 TO 1.4 m (48 TO 54")
2.1 m. (7')	1.5 TO 1.7 m (60 TO 66")

SIZE TO BE USED IS DEPENDENT ON DRAIN ANGLES.

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		PRE-CAST CONCRETE STORM DRAIN MANHOLE	
George E. Dowell 2/14/07 ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-3 1 OF 2



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		PRE-CAST CONCRETE STORM DRAIN MANHOLE	
George E. Dowell 2/14/07 ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-3 2 OF 2

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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9000 N. MOPAC EXPRESSWAY, SUITE 800
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512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

STORM DRAIN STANDARD DETAILS

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
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STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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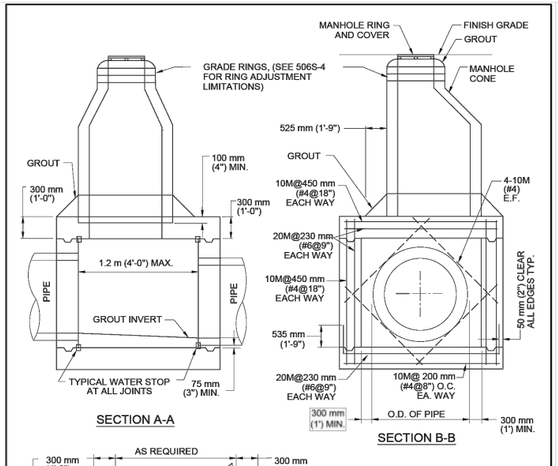
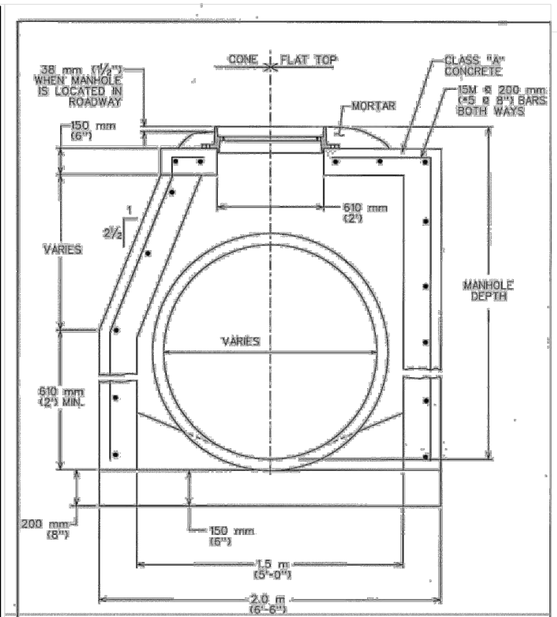
SD-902

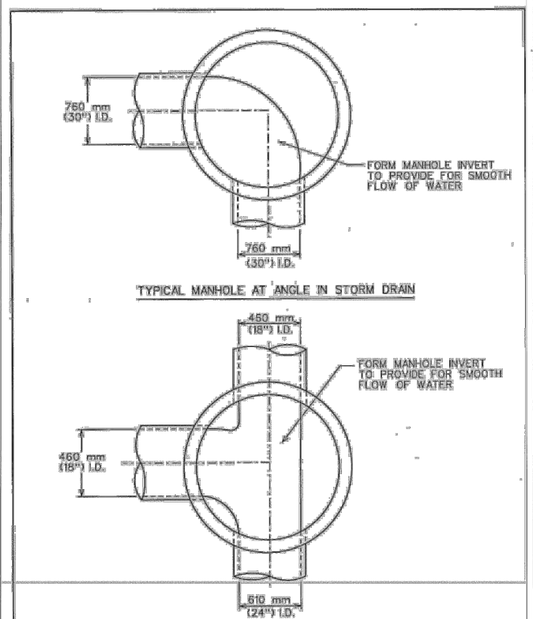


1. BOX WALLS MUST BE FORMED INSIDE AND OUTSIDE WITH APPROVED MATERIALS.
2. USE CLASS "A" CONCRETE.
3. TYPICAL CAST IN PLACE BOX FOR 760 mm (30") OR LARGER PIPE.
4. REINFORCING STEEL SHALL MEET ITEM 406, REINFORCING STEEL.

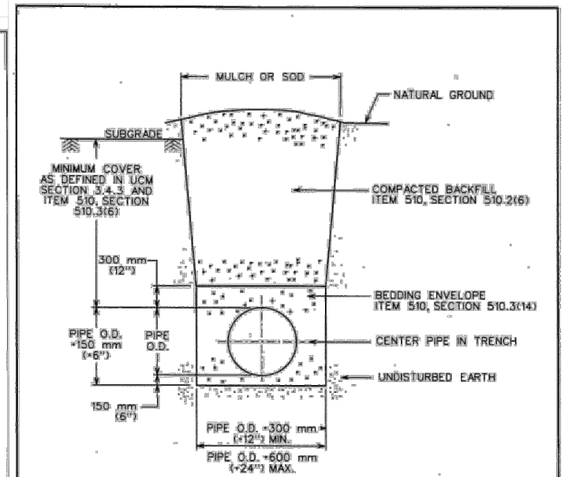
CITY OF AUSTIN WATER AND WASTEWATER UTILITY		TYPICAL BOX MANHOLE 760 mm (30") & LARGER PIPE	
RECORD COPY SIGNED BY KATHI F. PAYNE	2/17/00 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-5 1 OF 1



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		STORM DRAIN MANHOLE DETAIL	
George E. Rawlt 2/14/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-11	

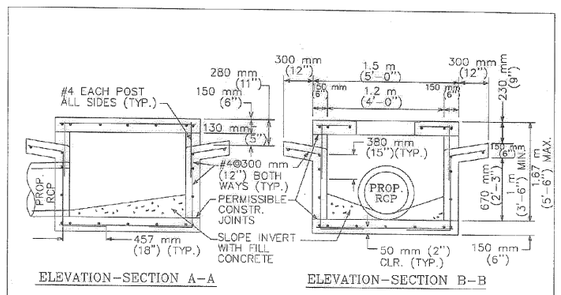


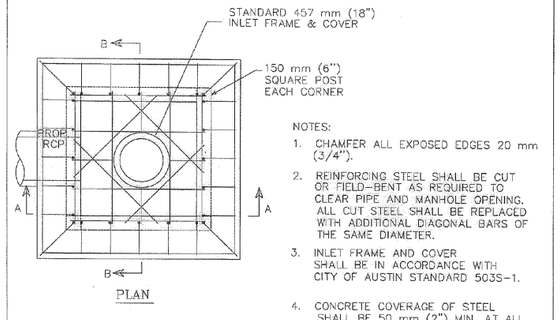
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		MANHOLE INVERT PLAN	
George E. Rawlt 2/14/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-1	



REFERENCES:
1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510,
   SECTION 510.2(6), "SELECT BACKFILL OR BORROW"
   SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"
   SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	
Bill Andrews 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-5	

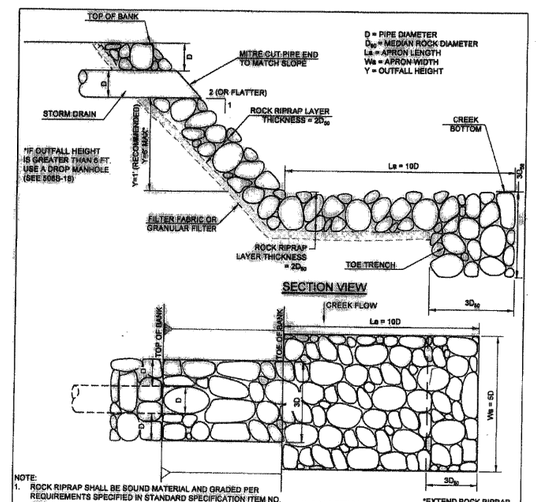




NOTES:
1. CHAMFER ALL EXPOSED EDGES 20 mm (3/4").
2. REINFORCING STEEL SHALL BE CUT OR FIELD-BENT AS REQUIRED TO CLEAR PIPE AND MANHOLE OPENING. ALL CUT STEEL SHALL BE REPLACED WITH ADDITIONAL DIAGONAL BARS OF THE SAME DIAMETER.
3. INLET FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
4. CONCRETE COVERAGE OF STEEL SHALL BE 50 mm (2") MIN. AT ALL SURFACES.
5. ANY MODIFICATION TO THIS STANDARD SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

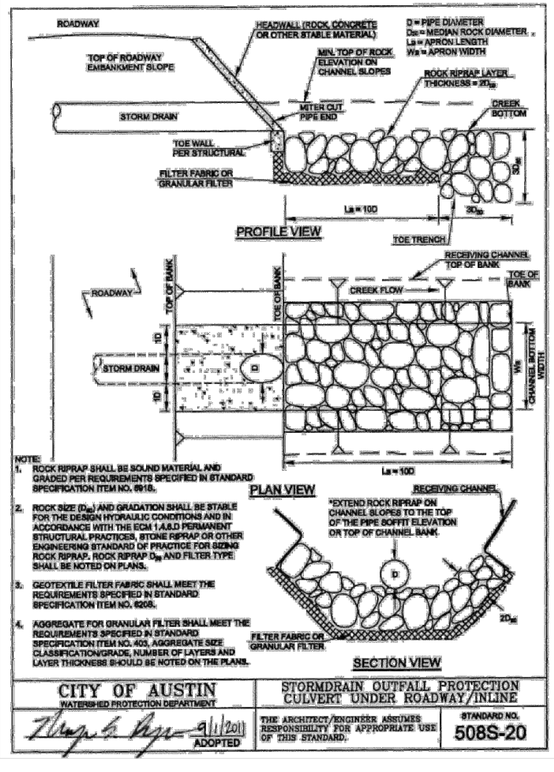
N.T.S.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		4-SIDED AREA INLET	
Keith C. Rowe, P.E. 5/18/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	STANDARD NO. 508S-9	



NOTE:
1. ROCK RIPRAP SHALL BE SOUND MATERIAL AND GRADED PER REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 6918.
2. ROCK SIZE (D_{50}) AND GRADATION SHALL BE STABLE FOR THE DESIGN HYDRAULIC CONDITIONS AND IN ACCORDANCE WITH THE ECM 1.4.6.D PERMANENT STRUCTURAL PRACTICES, STONE RIPRAP OR OTHER ENGINEERING STANDARD OF PRACTICE FOR SIZING ROCK RIPRAP. ROCK RIPRAP D_{50} AND FILTER TYPE SHALL BE NOTED ON PLANS.
3. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 6266.
4. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 403, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STORMDRAIN OUTFALL PROTECTION PIPE DISCHARGE ON SLOPE-LOW BANK	
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-16	



NOTE:
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4. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 403, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STORMDRAIN OUTFALL PROTECTION CULVERT UNDER ROADWAY/INLINE	
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-20	

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STORM DRAIN STANDARD DETAILS

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

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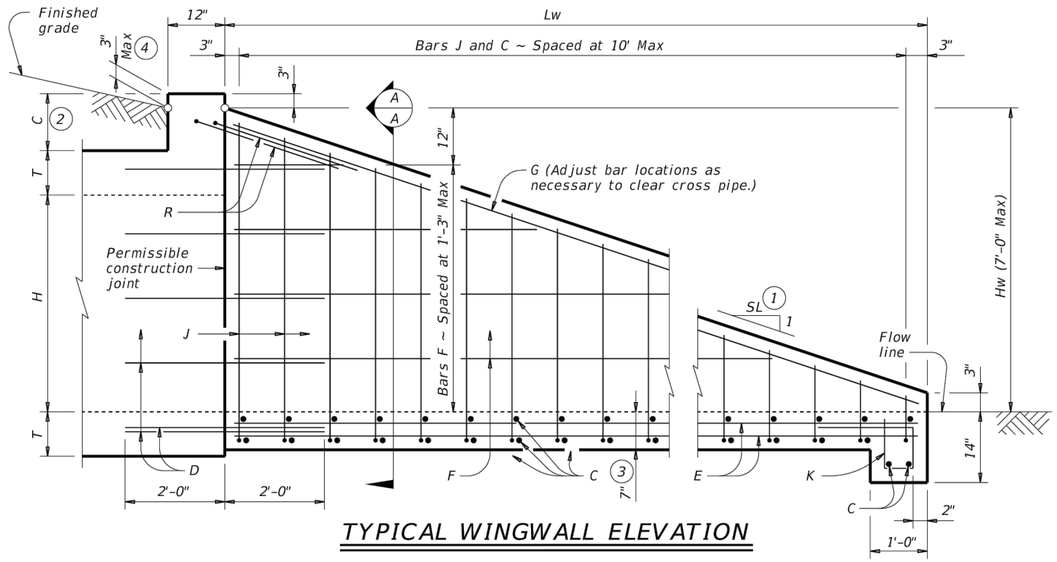
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
SD-903

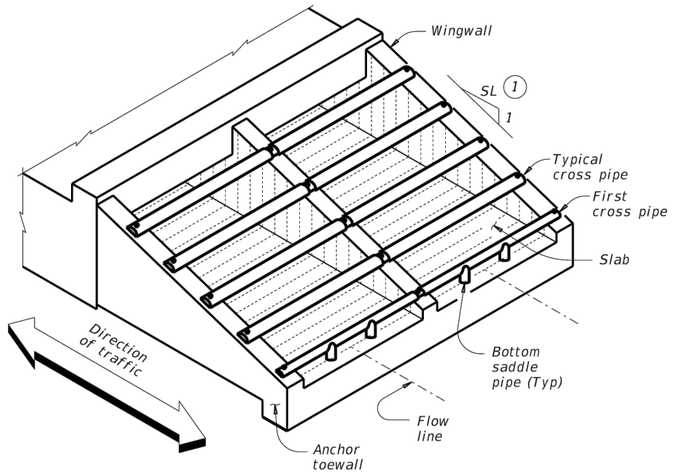
Dwg Info: G:\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD\412_Muni\C-STORM-DETL-01.dwg — Tab: 3 — Plotted: 2/12/2025 8:13 PM By: JAVIER HOLGUIN

DATE:
FILE:



TYPICAL WINGWALL ELEVATION

(Cross pipes not shown for clarity.)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing bolted anchor option.)

WING DIMENSION CALCULATIONS:

$Hw = H + T + C - 0.250'$

$Lw = (Hw - 0.250') (SL)$

For cast-in-place culverts:

$Atw = (N) (S) + (N + 1) (U)$

For precast culverts:

$Atw = (N) (2U + S) + (N - 1) (0.500')$

Total Wingwall Area (SF)
$= (0.5) (Hw + 0.250') (Lw) (N - 1)$

Total Concrete Volume (CY)
$= [(\text{Wingwall Area}) (0.583') +$
$(Lw) (Atw) (0.583') +$
$(Atw) (1.000') (1.167' - 0.583')] \div (27)$

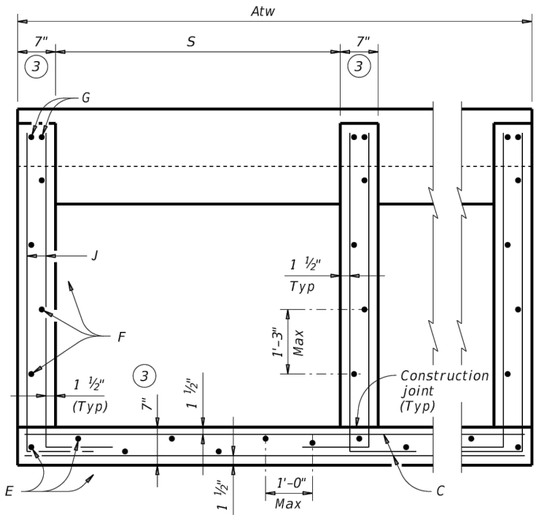
Total Reinforcing (Lb)
$= (1.55) (Lw) (Atw) +$
$(4.43) (Atw) +$
$(K) (Hw) (N + 1) (\sqrt{Lw})$

C = Height of curb above top of top slab (feet)
Hw = Height of wingwall (feet)
K = Constant value for use in formulas

Slope SL:1	K
6:1	~ 10.41

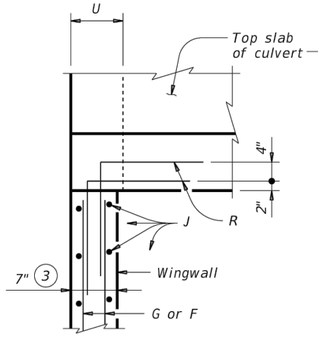
Atw = Anchor toewall length (feet)
Lw = Length of wingwall (feet)
N = Number of culvert barrels
SL:1 = Side slope ratio (horizontal : 1 vertical)

See applicable box culvert standard for H, S, T, and U values.



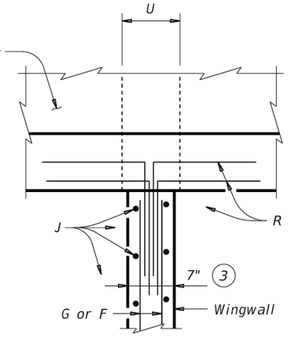
SECTION A-A

(Showing typical wingwall and wing slab reinforcing. Pipe runners not shown for clarity.)



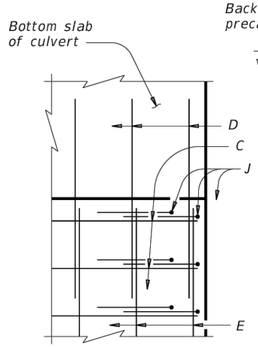
AT TOP OF EXTERIOR WINGWALL

(Cast-in-place culvert)



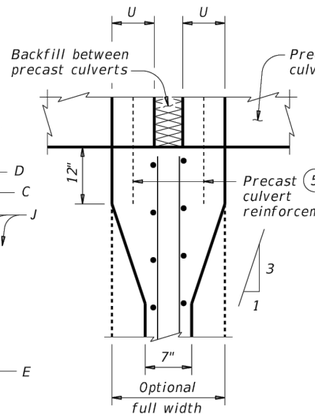
AT TOP OF INTERIOR WINGWALL

(Cast-in-place culvert)



AT OUTSIDE OF BOTTOM SLAB

(Cast-in-place culvert)



AT INTERIOR WINGWALL

(Precast culvert)

PLAN VIEWS OF CORNER DETAILS

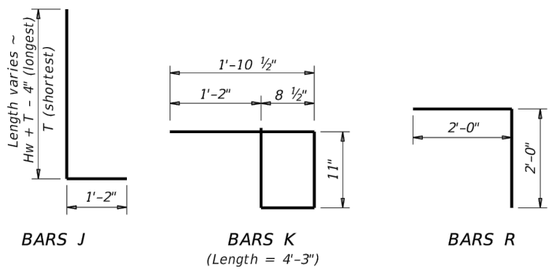


TABLE OF REINFORCING BAR SIZES AND SPACING

Bar	Size	Spacing
C	#4	10" Max
D	#4	Match F and E
E	#4	1'- 0" Max
F	#4	1'- 3" Max
G	#6	As shown
J	#4	10" Max
K	#4	1'- 0" Max
R	#4	As shown

(1) Provide 6:1 or flatter slope.

(2) 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to Extended Curb Details the Extended Curb Details (ECD) standard sheet.

(3) Wingwall and slab thicknesses may be the same as the adjacent culvert wall and slab thicknesses (7" Minimum). If thicknesses greater than the minimum (7") are used, no changes will be made in quantities and no additional compensation will be allowed.

(4) For vehicle safety, reduce height, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.

(5) For culverts with C = 0", the precast culvert reinforcing may extend 1'-0" minimum into wingwall. Wingwall bars D and R may be omitted. Otherwise, refer to the Wingwall Connection detail on the Box Culvert Precast Miscellaneous Details (SCP-MD) standard sheet.

MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Adjust reinforcing as necessary to provide a minimum clear cover of 1½".
Provide Class "C" concrete (f`c = 3,600 psi).
Provide pipe runners, cross pipes, and anchor pipes meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.
Provide ASTM A307 bolts.
Galvanize all steel components, except the concrete reinforcing, unless required elsewhere in the plans, after fabrication.
Repair galvanizing damaged during transport or construction in accordance with Item 445, "Galvanizing."

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
The safety end treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the cross pipes.
Cross pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.
The quantities for concrete, reinforcing steel, and cross pipes resulting from the formulas given herein are for Contractor's information only.
See the Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
Alternate design drawings bearing the seal of a professional engineer will be acceptable for precast construction of the safety end treatments.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

Texas Department of Transportation

Bridge Division Standard

SAFETY END TREATMENT
FOR BOX CULVERTS (MAXIMUM Hw = 7'-0")
TYPE I ~ PARALLEL DRAINAGE
SETB-PD

FILE: CD-SETBPD-22.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS 06-2022 ~ Wing dimensions	DIST	COUNTY		SHEET NO. SD-904

DATE:
FILE:

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure end)

Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing length (2~wings) (3)	
					Bars J1		Bars J2			
Maximum Wingwall Height Hw	W	X	Y	Z	Size	Spa	Size	Spa	Reinf Lb/Ft)	Conc (CY/Ft)
2'–6"	2'–5"	1'–0"	9"	7"	#4	1'–0"	#4	1'–0"	33.73	0.248
3'–0"	2'–5"	1'–0"	9"	7"	#4	1'–0"	#4	1'–0"	37.07	0.261
3'–6"	2'–5"	1'–0"	9"	7"	#4	1'–0"	#4	1'–0"	37.74	0.273
4'–0"	2'–5"	1'–0"	9"	7"	#4	1'–0"	#4	1'–0"	38.41	0.285
4'–6"	3'–2"	1'–6"	1'–0"	7"	#4	1'–0"	#4	1'–0"	41.75	0.330
5'–0"	3'–2"	1'–6"	1'–0"	7"	#4	1'–0"	#4	1'–0"	45.09	0.343
5'–6"	3'–2"	1'–6"	1'–0"	7"	#4	1'–0"	#4	1'–0"	45.75	0.355
6'–0"	3'–2"	1'–6"	1'–0"	7"	#4	1'–0"	#4	1'–0"	46.42	0.367
7'–0"	3'–8"	1'–9"	1'–3"	7"	#4	1'–0"	#4	1'–0"	52.77	0.414
8'–0"	4'–2"	2'–0"	1'–6"	8"	#5	1'–0"	#4	1'–0"	60.19	0.486
9'–0"	4'–8"	2'–3"	1'–9"	8"	#4	6"	#4	6"	81.49	0.535
10'–0"	5'–2"	2'–6"	2'–0"	8"	#5	6"	#4	6"	97.25	0.584
11'–0"	5'–8"	2'–9"	2'–3"	8"	#6	6"	#5	6"	133.65	0.634
12'–0"	6'–2"	3'–0"	2'–6"	9"	#7	6"	#5	6"	162.29	0.721
13'–0"	6'–8"	3'–3"	2'–9"	11"	#7	6"	#5	6"	178.80	0.856
14'–0"	7'–2"	3'–6"	3'–0"	1'–0"	#8	6"	#5	6"	216.78	0.959
15'–0"	7'–8"	4'–0"	3'–0"	1'–1"	#9	6"	#6	6"	283.06	1.068
16'–0"	8'–2"	4'–6"	3'–0"	1'–3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING
(2~wings)

Bar	Size	No.	Spa
D	#5	~	1'–0"
E	#4	~	1'–0"
F	#4	~	1'–0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'–0"
R	#5	6	~
V	#4	~	1'–0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'–6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION FORMULAS:

(All values are in feet.)

Hw = H + T + C – 0.250'
Lw = (Hw – 0.333') (SL)

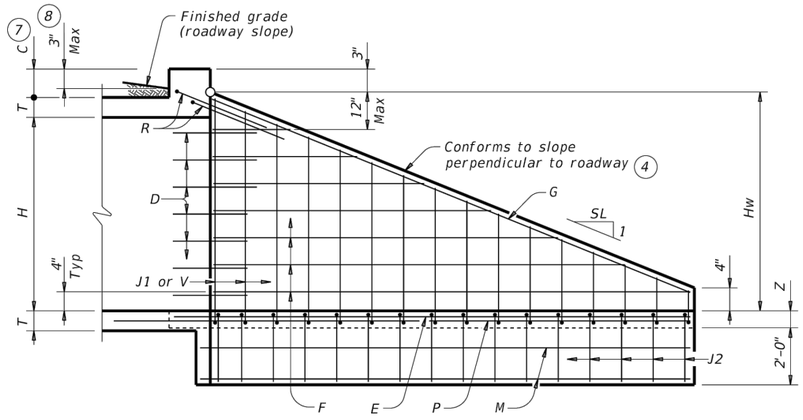
For cast–in–place culverts:
Ltw = (N) (S) + (N + 1) (U)

For precast culverts:
Ltw = (N) (2U + S) + (N – 1) (0.5')

Total Wingwall Area (two wings ~ SF) = (Hw + 0.333') (Lw)

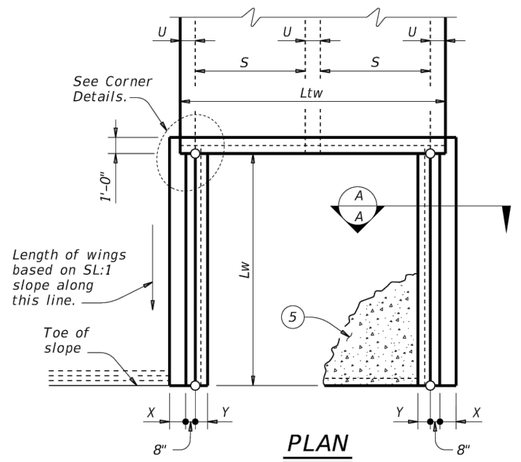
Hw = Height of wingwall
SL:1 = Side slope ratio (horizontal:1 vertical)
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans

See applicable box culvert standard sheet for H, S, T, and U values.



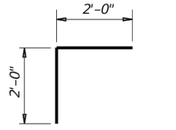
INSIDE ELEVATION

(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)

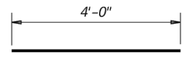


PLAN

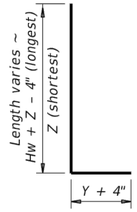
(Showing dimensions.)



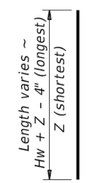
BARS R



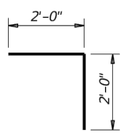
BARS D



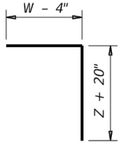
BARS J1



BARS V



BARS L



BARS J2

(1) Extend Bars P 3'–0" minimum into bottom slab of box culvert.

(2) Adjust as necessary to maintain 1 1#2" clear cover and 4" minimum between bars.

(3) Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings, multiply the tabulated values by Lw.

(4) Recommended values of side slope are: 2:1, 3:1, 4:1, and 6:1.

(5) When shown elsewhere on the plans, construct 5" deep concrete riprap. Payment for riprap is as required by Item 432, "Riprap." Unless otherwise shown on the plans or directed by the Engineer, provide a 6" wide by 1'–6" deep reinforced concrete toewall along all edges of the riprap adjacent to natural ground; reinforce the toewall by extending typical riprap reinforcing into the toewall; and extend construction joints or grooved joints oriented in the direction of flow across the full distance of the riprap at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B–B will not be required.

(6) At Contractor's option, culvert toewall may be ended flush with wingwall toewall. Adjust reinforcing as needed.

(7) 0" Min to 5'–0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'–0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631–CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.

(8) For vehicle safety, the following requirements must be met:
- For structures without bridge rail, construct curbs no more than 3" above finished grade.
- For structures with bridge rail, construct curbs flush with finished grade.

Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

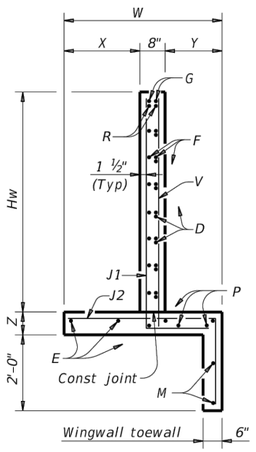
MATERIAL NOTES:

Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
In riprap concrete, synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing unless noted otherwise.

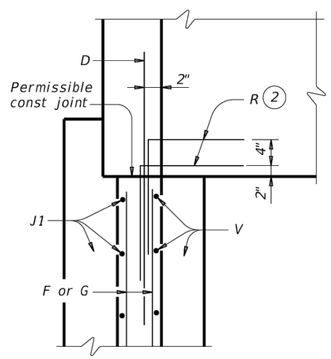
GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

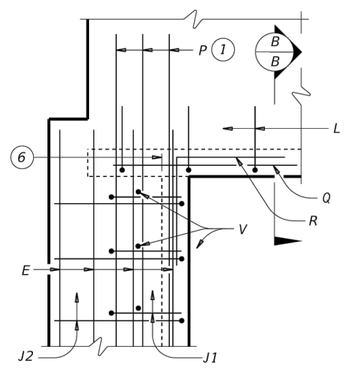
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.



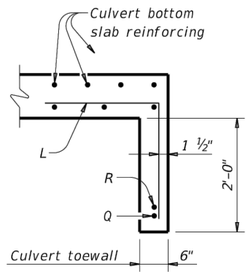
SECTION A-A



WINGWALL



FOOTING AND TOEWALL



SECTION B-B (5)

CORNER DETAILS

Texas Department of Transportation

Bridge Division Standard

CONCRETE WINGWALLS
WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS

SW-0

FILE: CD-SW0-20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
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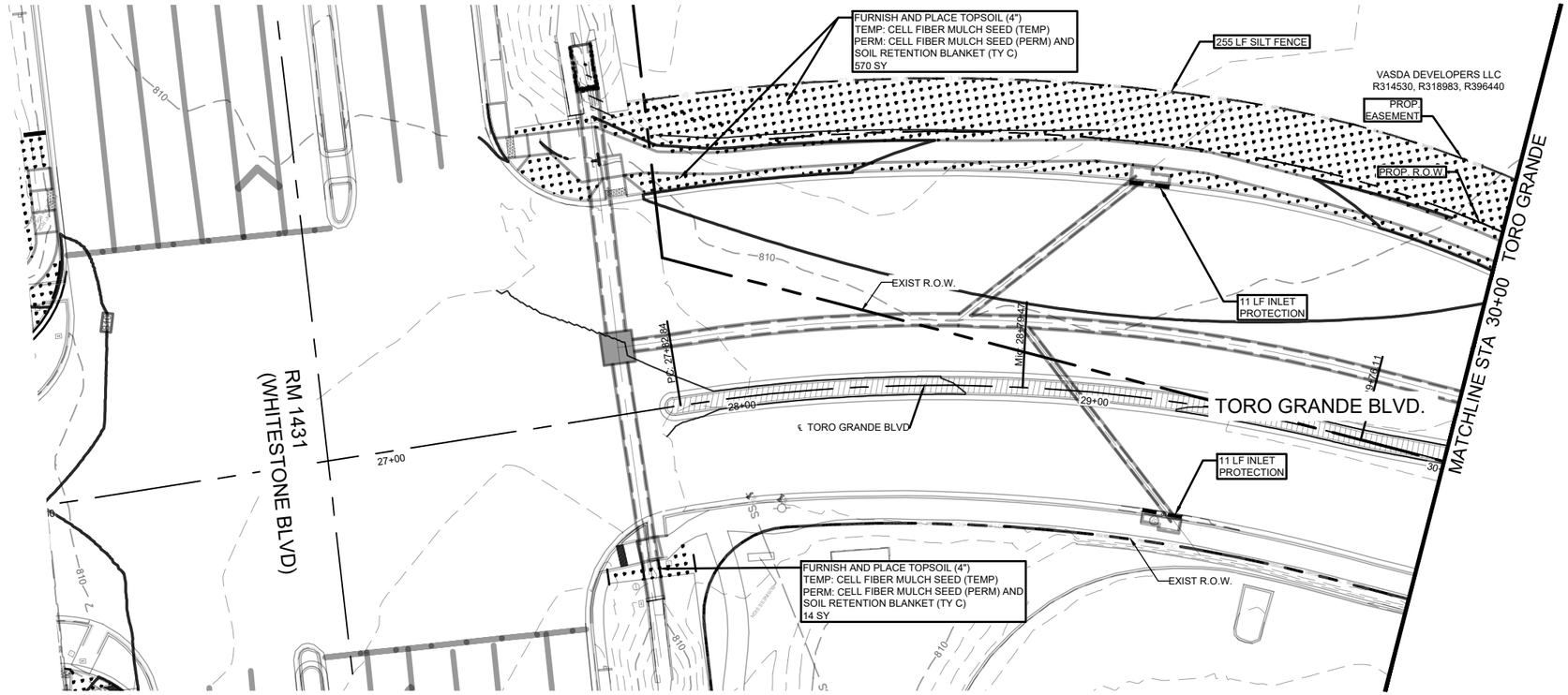
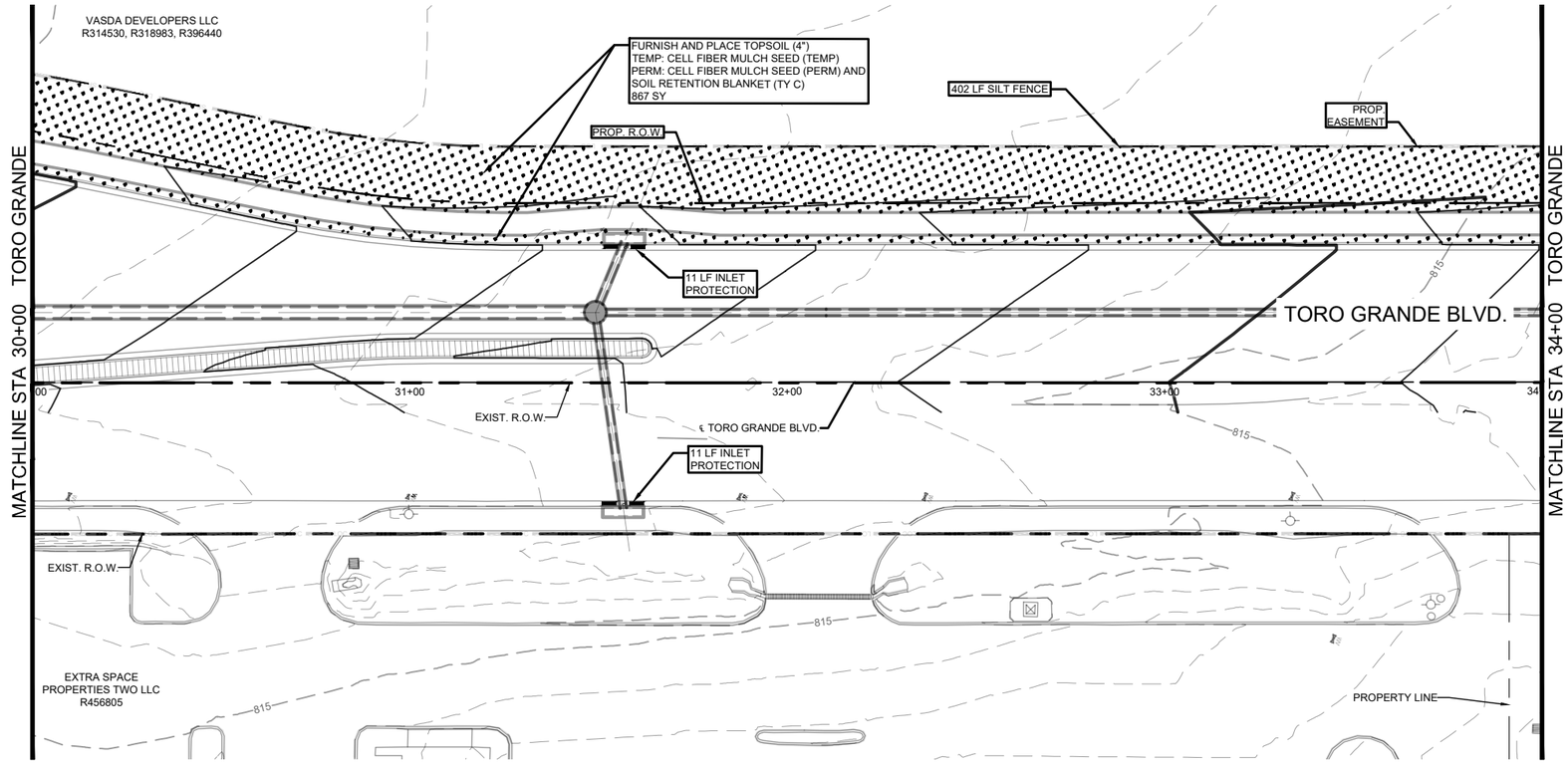
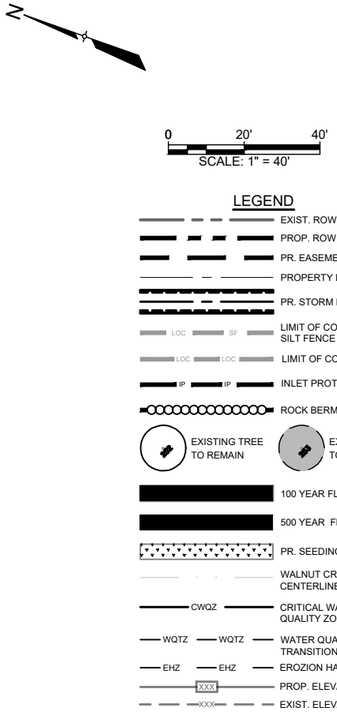
	DIST	COUNTY		SHEET NO.
				SD-905







GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY, SUITE 825
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

EROSION AND SEDIMENTATION PLAN
10+00 - 18+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: O. SAENZ
DRAWN: O. SAENZ
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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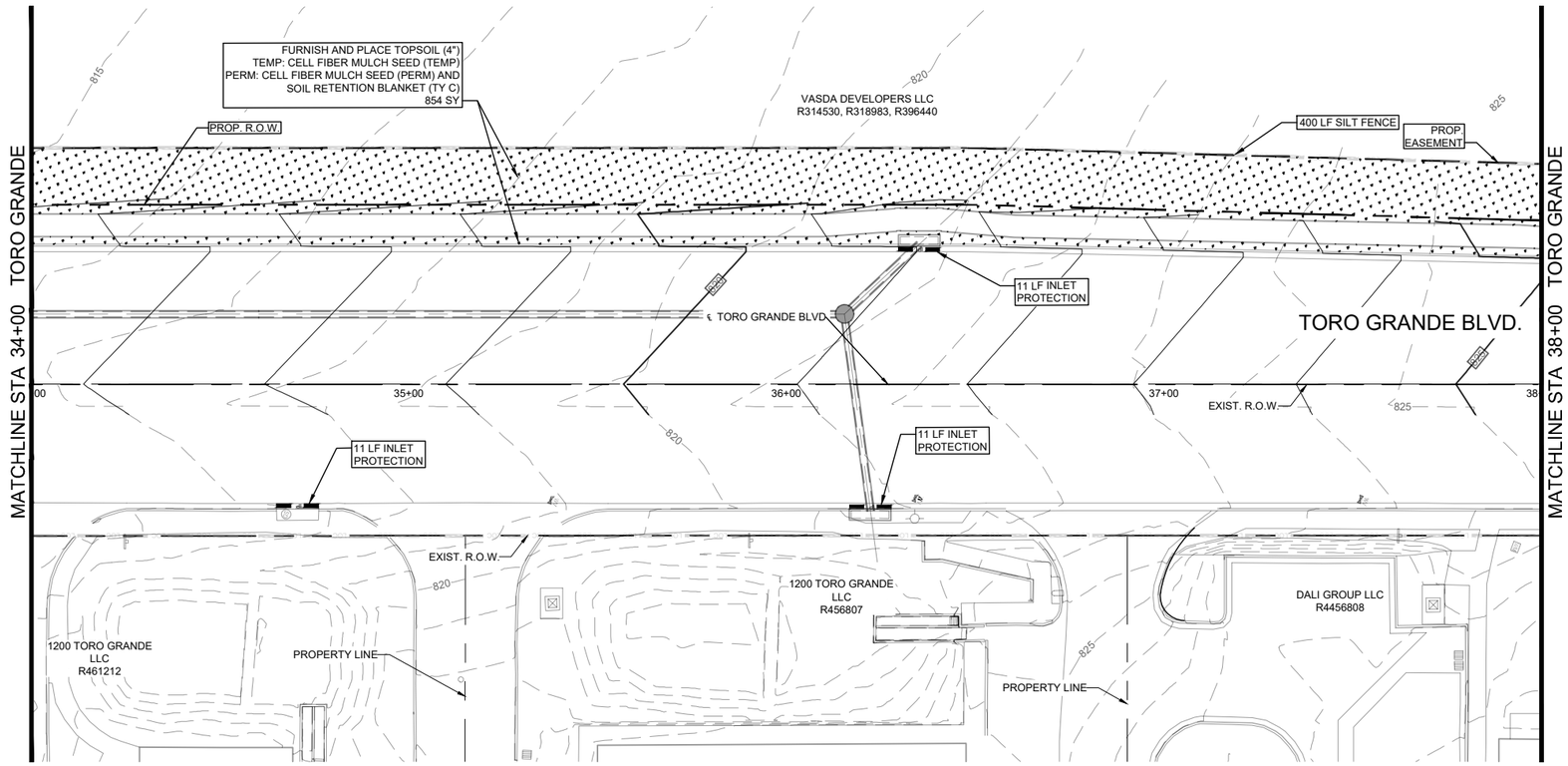
SHEET
ESC-100



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REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley

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AUSTIN, TEXAS 78759
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EROSION AND SEDIMENTATION PLAN
18+00 - 26+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: O. SAENZ
DRAWN: O. SAENZ
CHECK: L. PRINCE
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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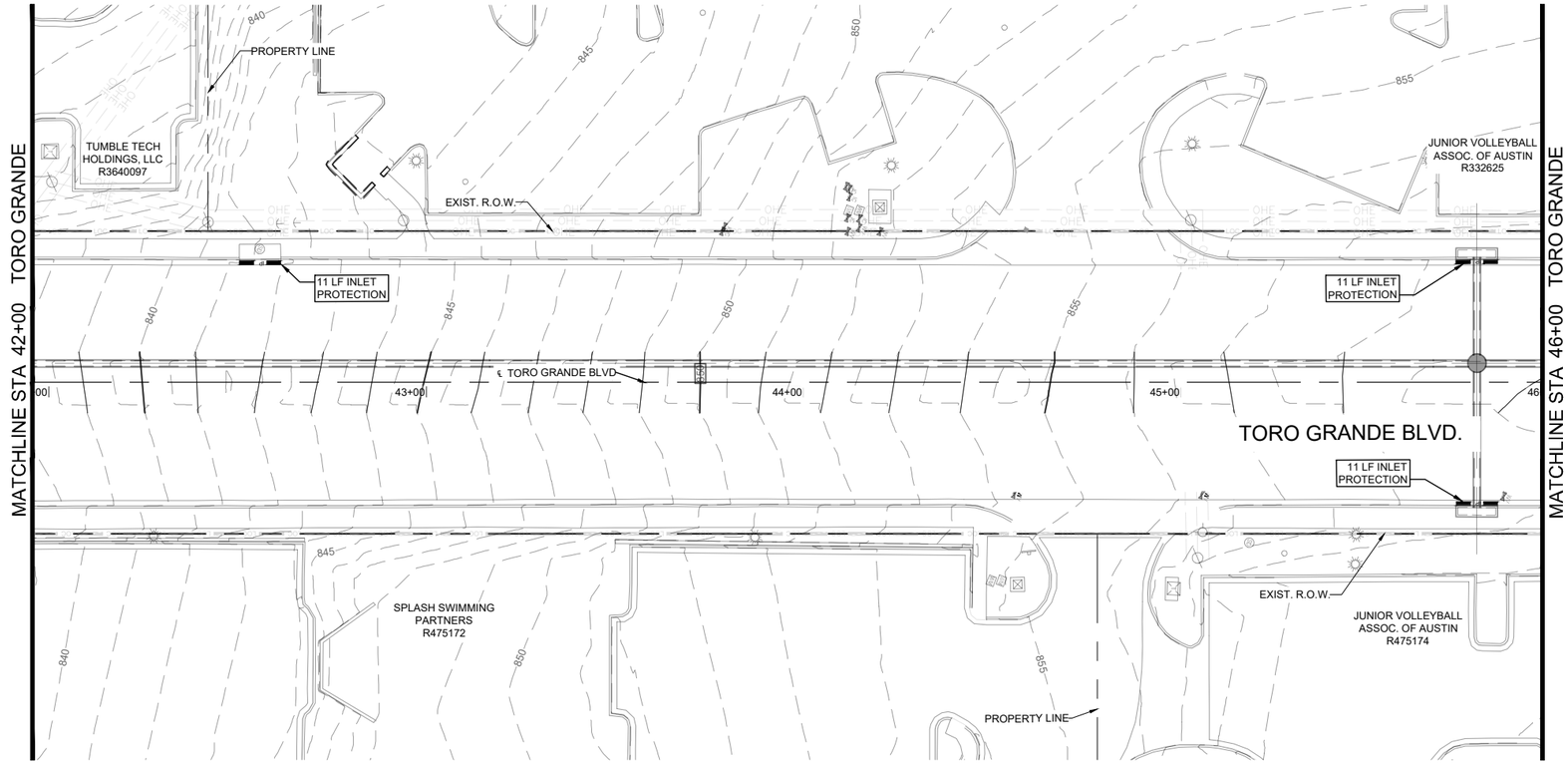
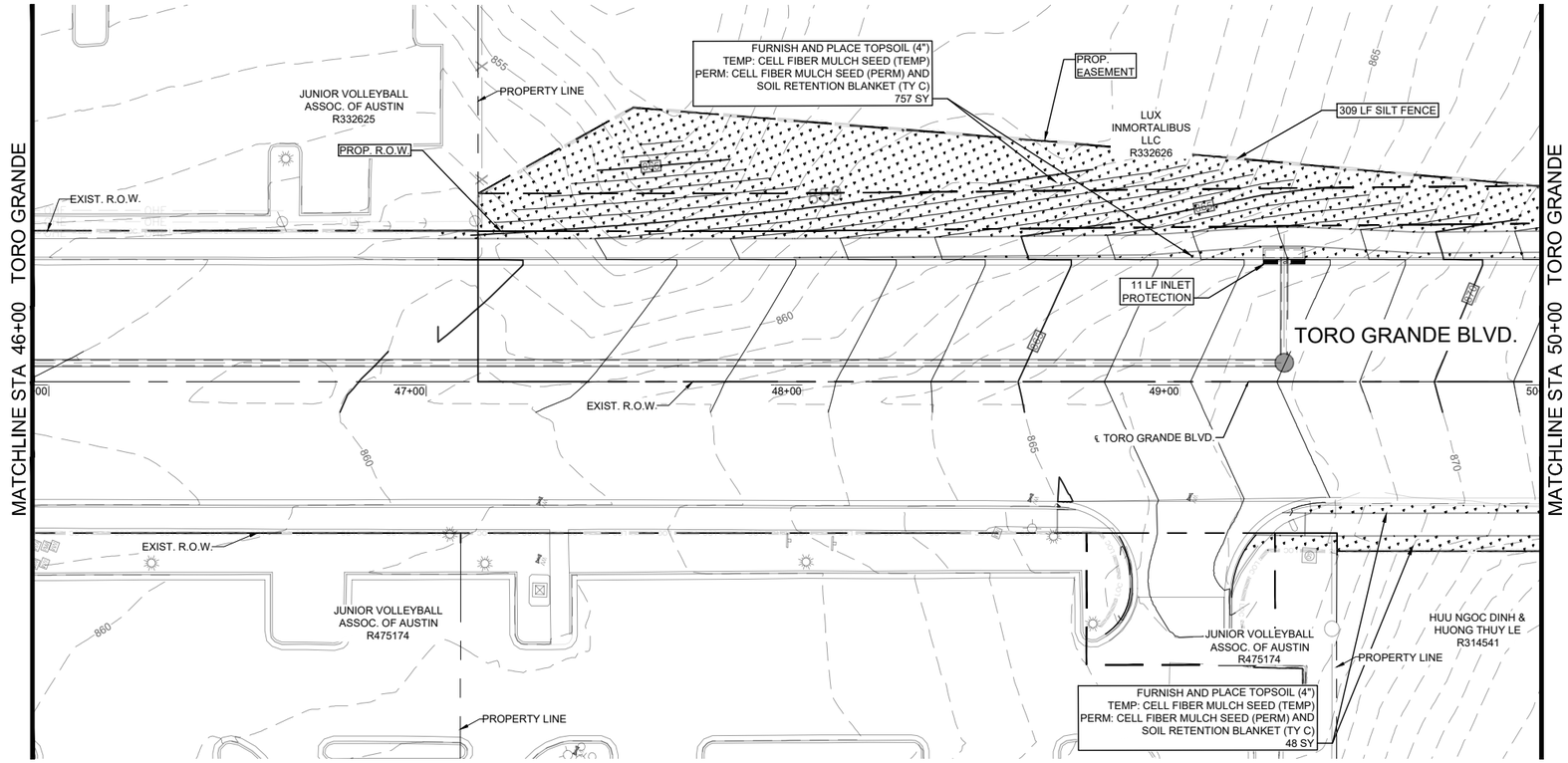
SHEET
ESC-101





0 20' 40'
SCALE: 1" = 40'

LEGEND

- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- PR. STORM DRAIN
- LIMIT OF CONSTRUCTION/ SILT FENCE
- LIMIT OF CONSTRUCTION
- INLET PROTECTION
- ROCK BERM
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- 100 YEAR FLOOD PLAIN
- 500 YEAR FLOOD PLAIN
- PR. SEEDING
- WALNUT CREEK CENTERLINE
- CWQZ — CRITICAL WATER QUALITY ZONE
- WQTZ — WATER QUALITY TRANSITION ZONE
- EHZ — EROZION HAZARD ZONE
- PROP. ELEVATION
- EXIST. ELEVATION

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DRIVEWAYS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. SUBSIDIARY TO THE COST OF PAVEMENT, NO SEPARATE PAY ITEM.

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9000 N. MOPAC EXPRESSWAY, SUITE 800
AUSTIN, TEXAS 78759 | 512.834.9789 | FAX 512.834.7727
WWW.COBBFENDLEY.COM

EROSION AND SEDIMENTATION PLAN
26+00 - 34+00

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: O. SAENZ
DRAWN: O. SAENZ
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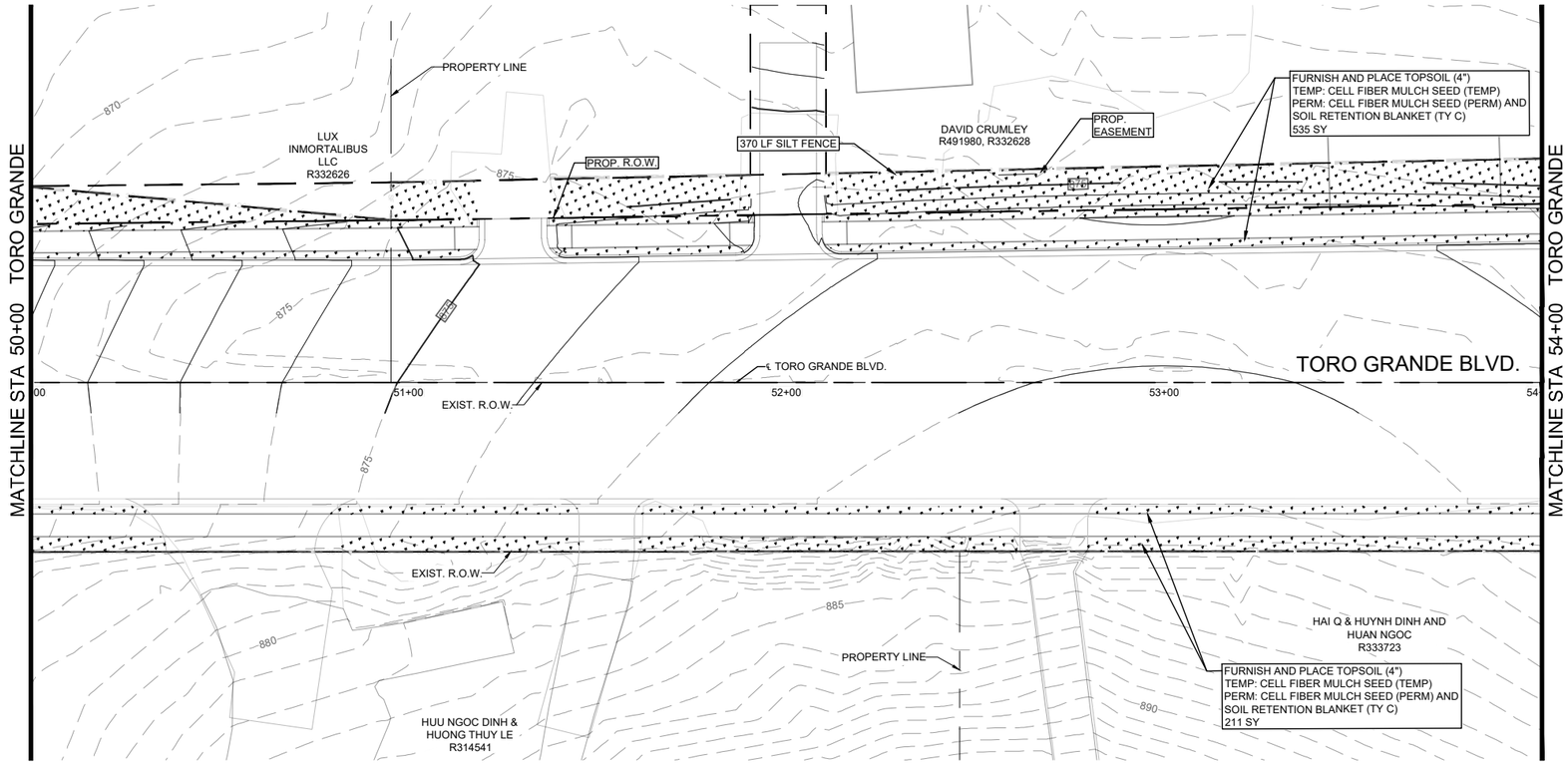

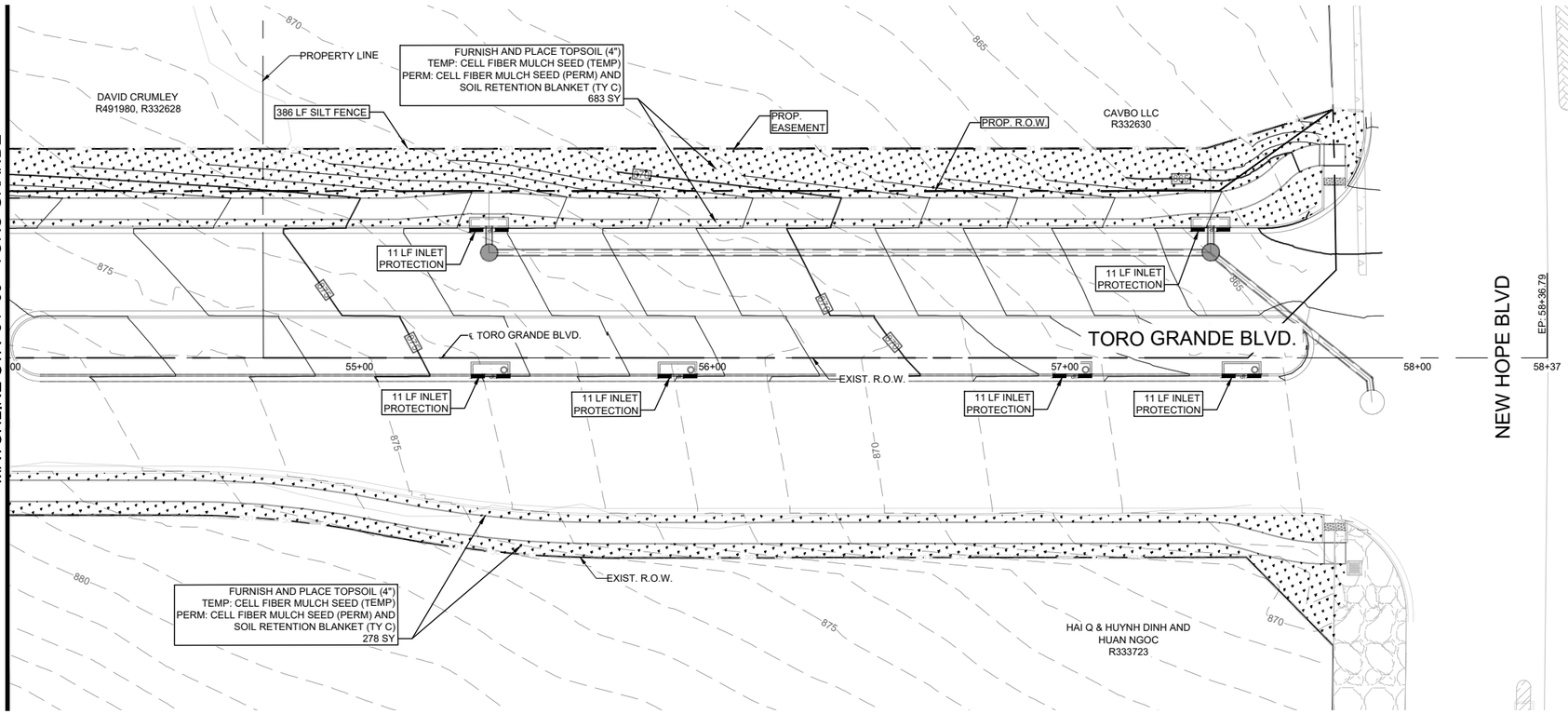

0 20' 40'
SCALE: 1" = 40'

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- EXIST. ROW
- PROP. ROW
- PR. EASEMENT
- PROPERTY LINE
- PR. STORM DRAIN
- LOC SF — LIMIT OF CONSTRUCTION/ SILT FENCE
- LOC LOC — LIMIT OF CONSTRUCTION
- IP IP — INLET PROTECTION
- ROCK BERM
- 252 EXISTING TREE TO REMAIN
- 253 EXISTING TREE TO BE REMOVED
- 100 YEAR FLOOD PLAIN
- 500 YEAR FLOOD PLAIN
- PR. SEEDING
- WALNUT CREEK CENTERLINE
- CWQZ — CRITICAL WATER QUALITY ZONE
- WQTZ WQTZ — WATER QUALITY TRANSITION ZONE
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34+00 - END

TORO GRANDE
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CEDAR PARK, TEXAS

CEDAR PARK

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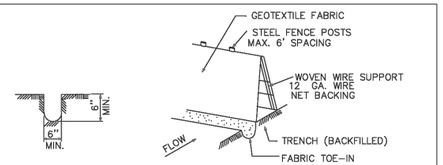


TRENCH CROSS SECTION SILT FENCE

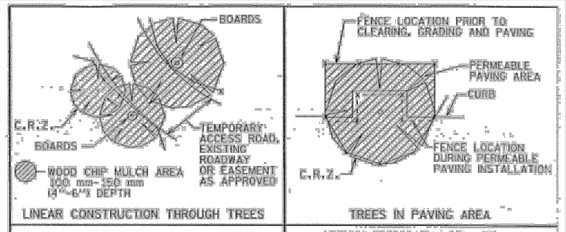
GENERAL NOTES:

1. SILT FENCE LOCATED ADJACENT TO PLAYGROUNDS, PARKS, SIDEWALKS, AND OTHER LOCATIONS AS DETERMINED BY CITY OF CEDAR PARK REPRESENTATIVES SHALL HAVE CITY APPROVED SAFETY CAPS ON ALL STEEL POSTS.
2. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
3. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
4. WHERE FENCE CAN NOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE. 6 INCHES DEEP AND 6 INCHES WIDE TO THE TRENCH MUST BE A MINIMUM OF ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
6. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.
8. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

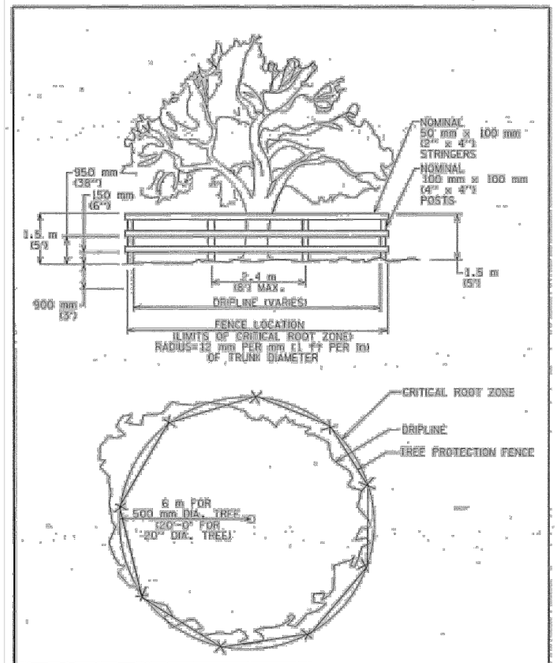
STANDARD SYMBOL SF

REV. DATE: 09/13/01

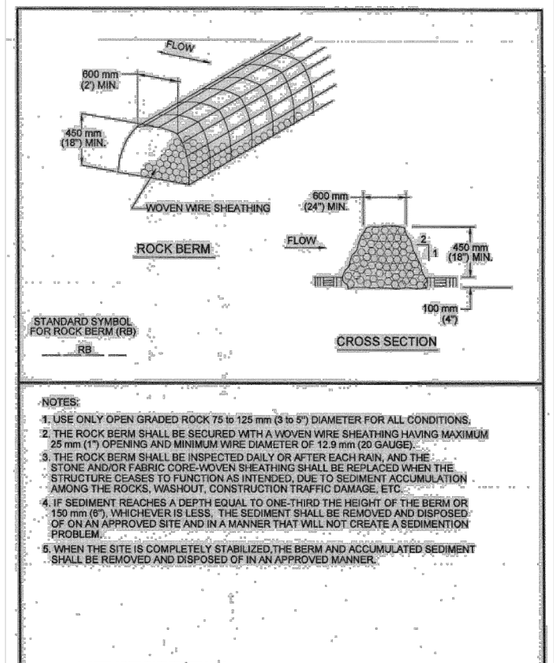
CITY OF CEDAR PARK ENGINEERING DEPARTMENT	SILT FENCE
DARWIN MARCHELL 09/13/2001 APPROVED DATE	ADOPTED: 09/13/2001 SCALE: N.T.S. INITIAL:



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE LOCATIONS
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 610S-1

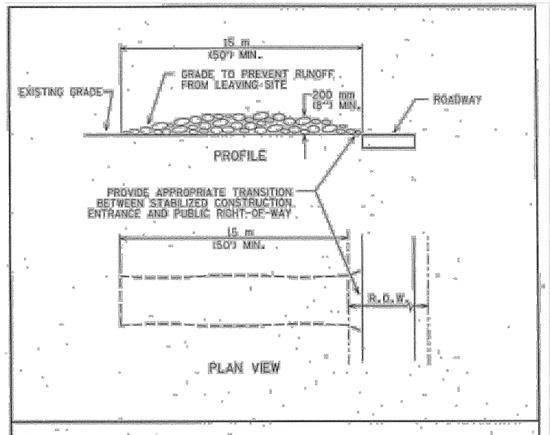


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE TYPE B - WOOD
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 610S-3



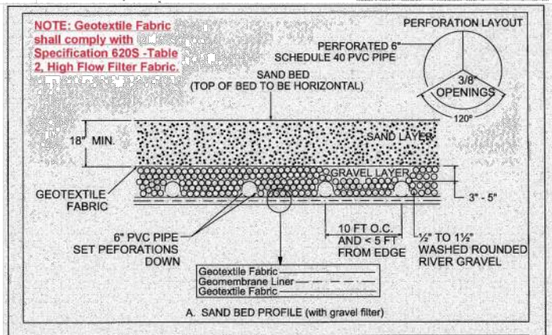
NOTES:
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

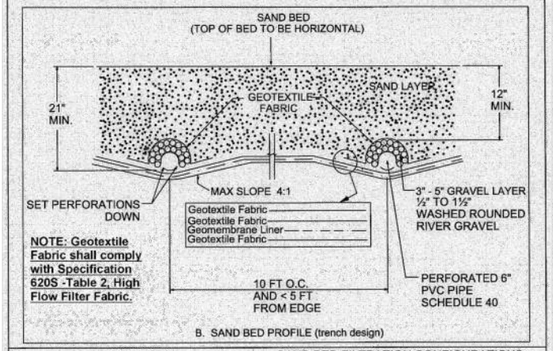
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM
8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 639S-1



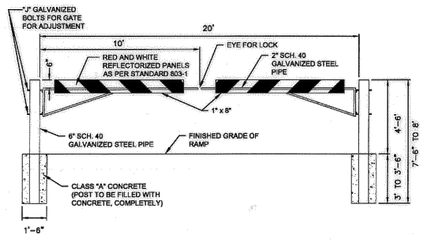
NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE
5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 641S-1



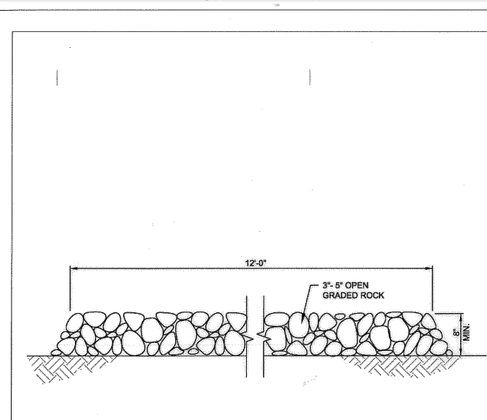


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SAND BED FILTRATION CONFIGURATIONS USING GEOMEMBRANE LINER
12/30/14 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 661-1



NOTE:
RAMP BARRICADE SUBSIDIARY TO ITEM 403-G CONCRETE STRUCTURES

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	POND PIPE GATE AT RAMP DETAIL
1/9/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 662S-1



NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. THICKNESS: NOT LESS THAN 200 mm (8").
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	POND MAINTENANCE ROAD CROSS SECTION
1/9/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 662S-2

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WWW.COBBFENDLEY.COM

EROSION AND SEDIMENTATION CONTROL STANDARD DETAILS

TORO GRANDE ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN:
DRAWN:
CHECK:
APPR:
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ESC-901

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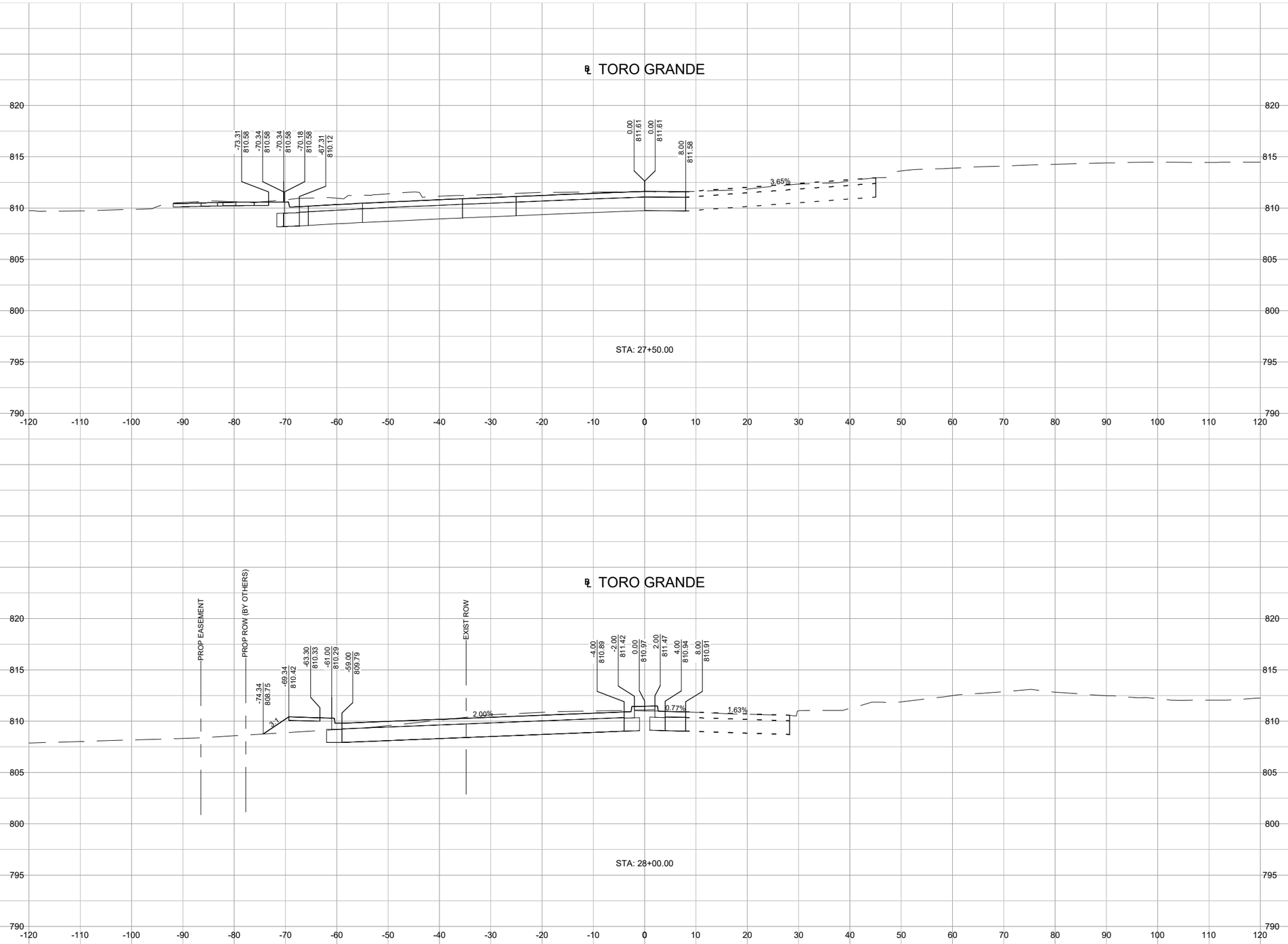

NOTES:

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TORO GRANDE NORTH-XSEC-1

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

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CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

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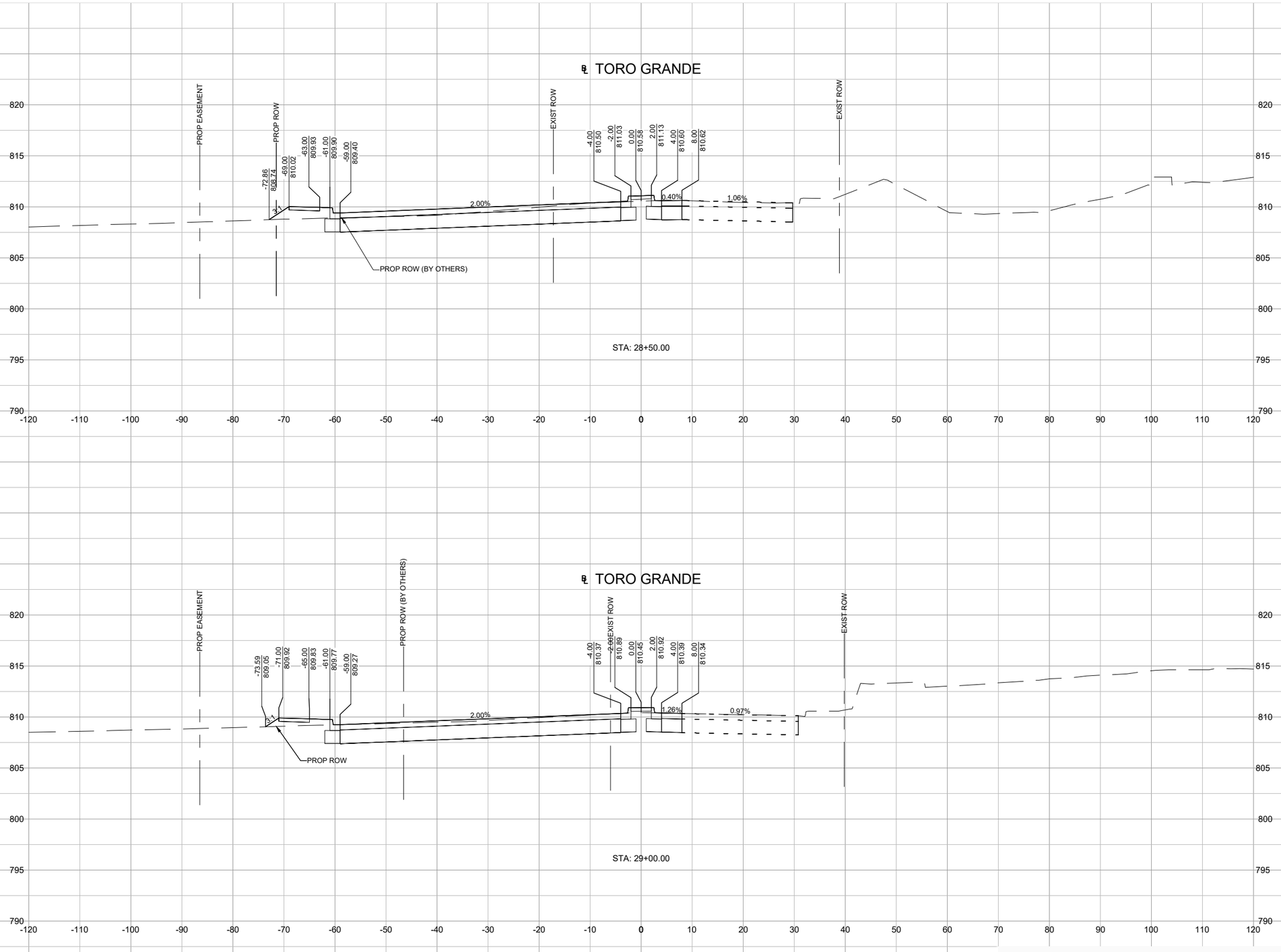
XS-100

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-1 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN



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TORO GRANDE NORTH-XSEC-2

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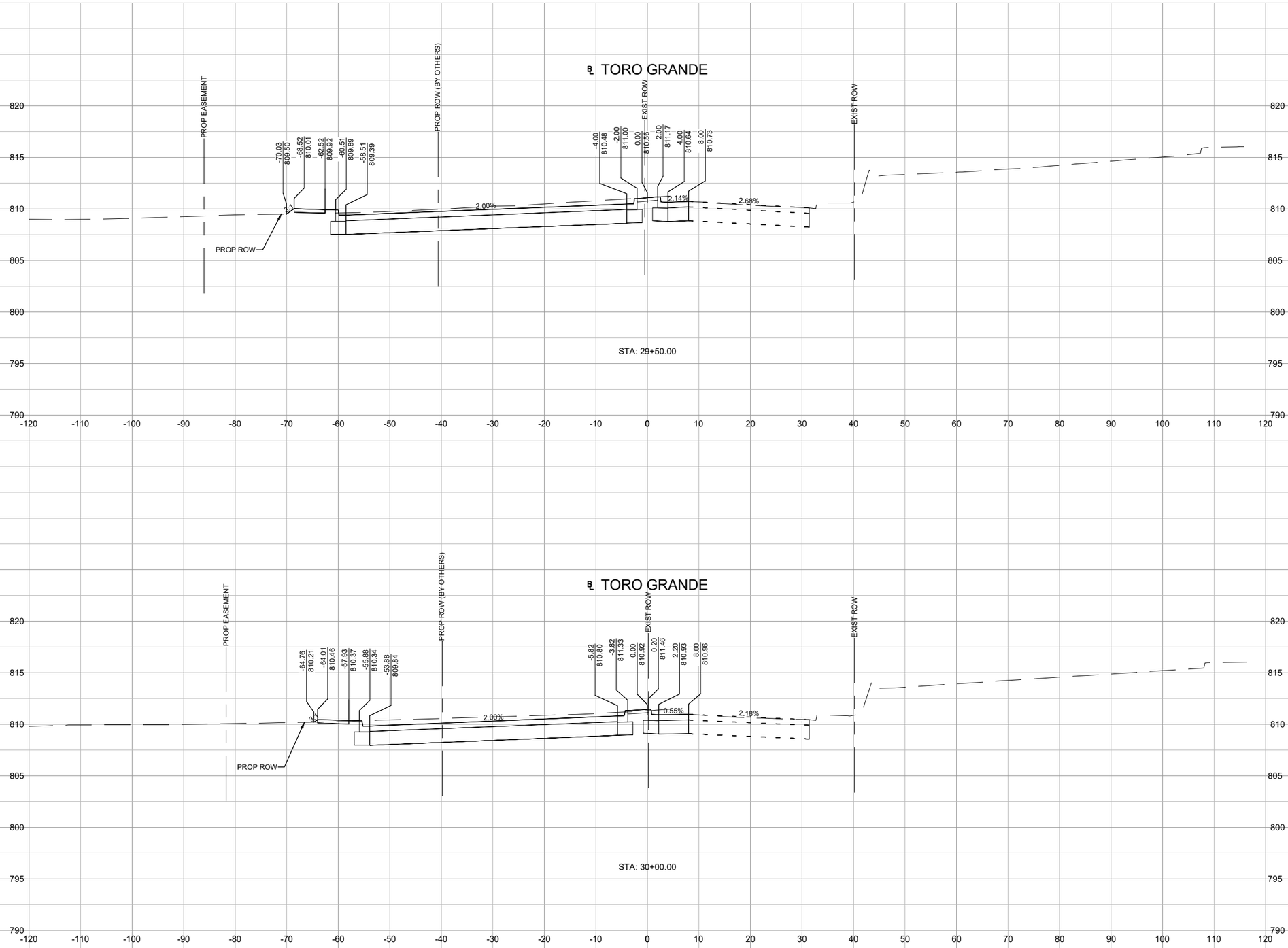

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TORO GRANDE NORTH-XSEC-3

TORO GRANDE
ROADWAY IMPROVEMENTS
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CEDAR PARK

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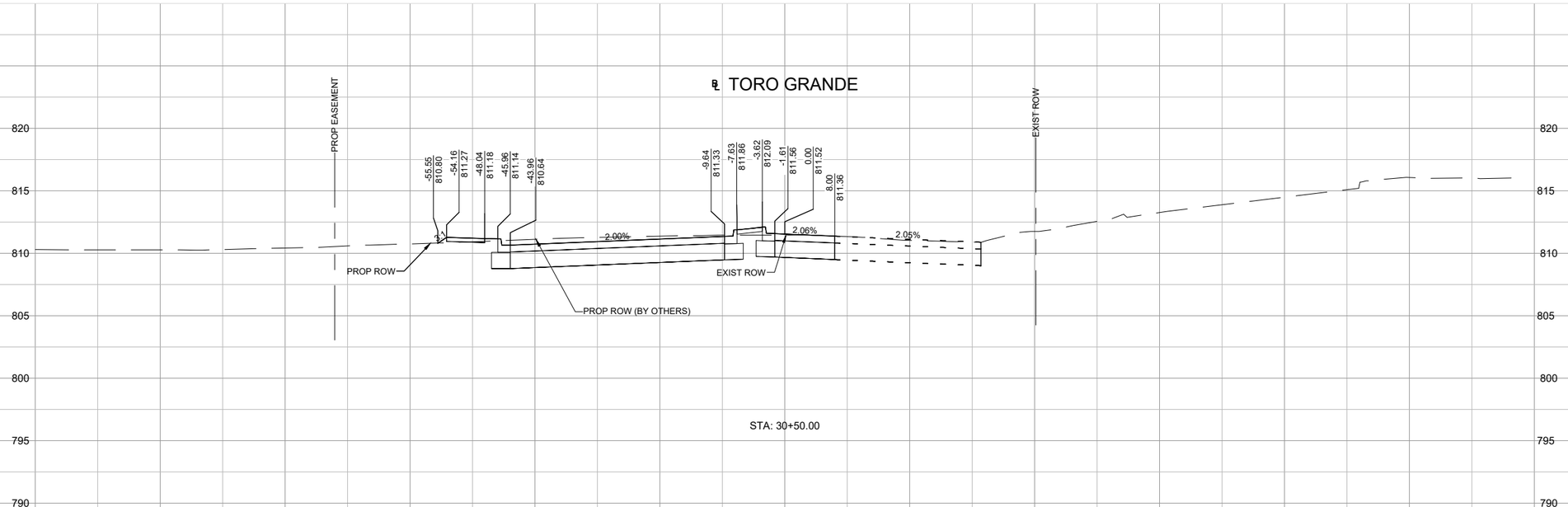

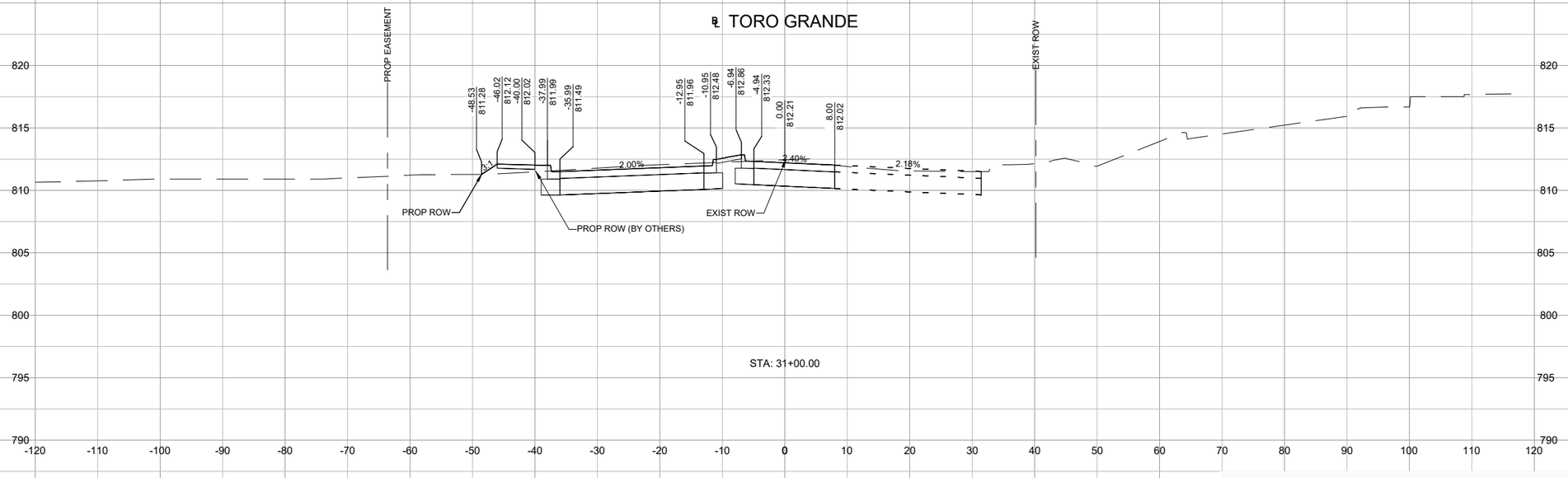

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TORO GRANDE NORTH-XSEC-4

TORO GRANDE
ROADWAY IMPROVEMENTS
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CEDAR PARK

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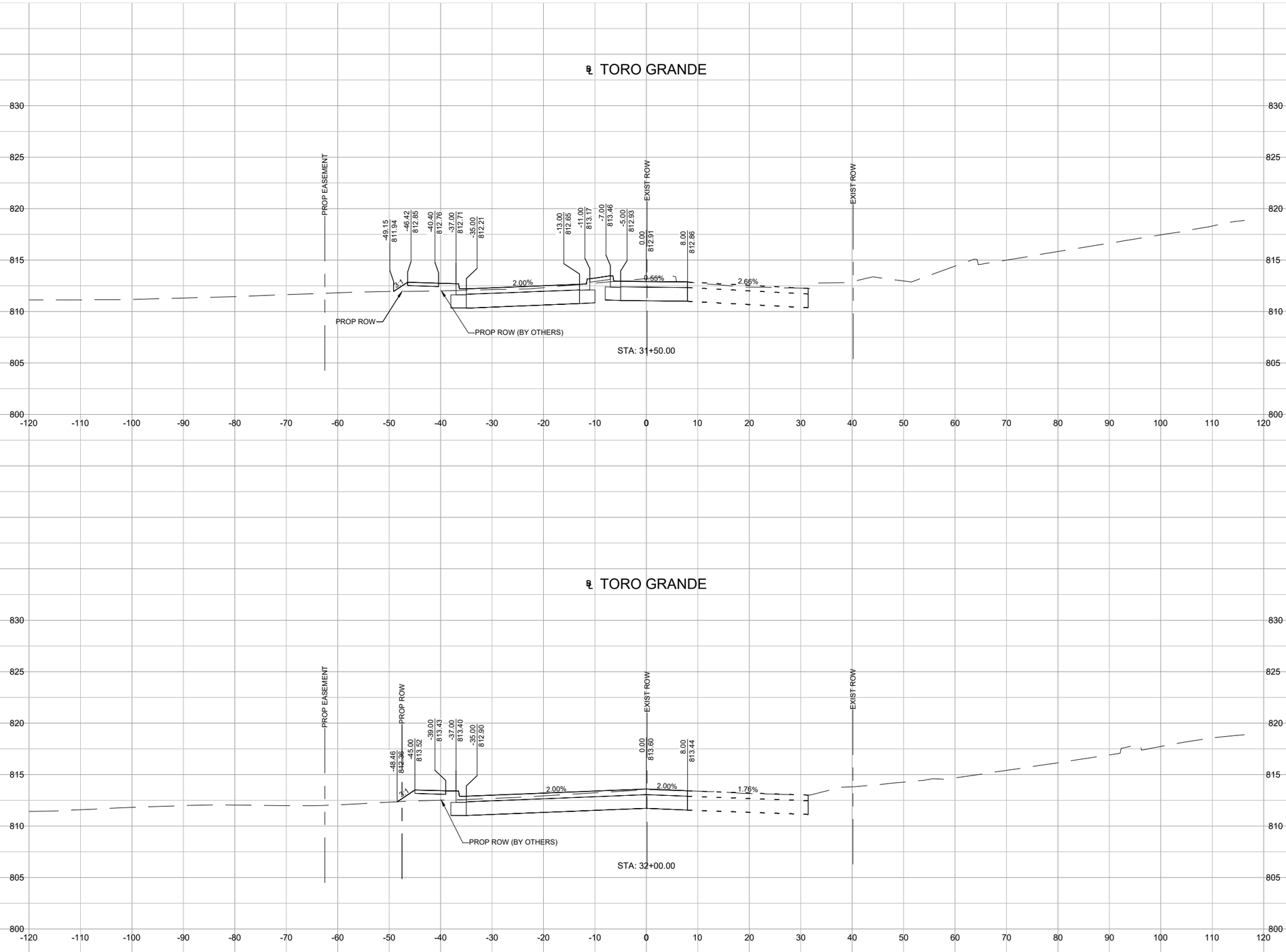
SHEET
XS-103

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-4 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN



NOTES:

1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 830
AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-5

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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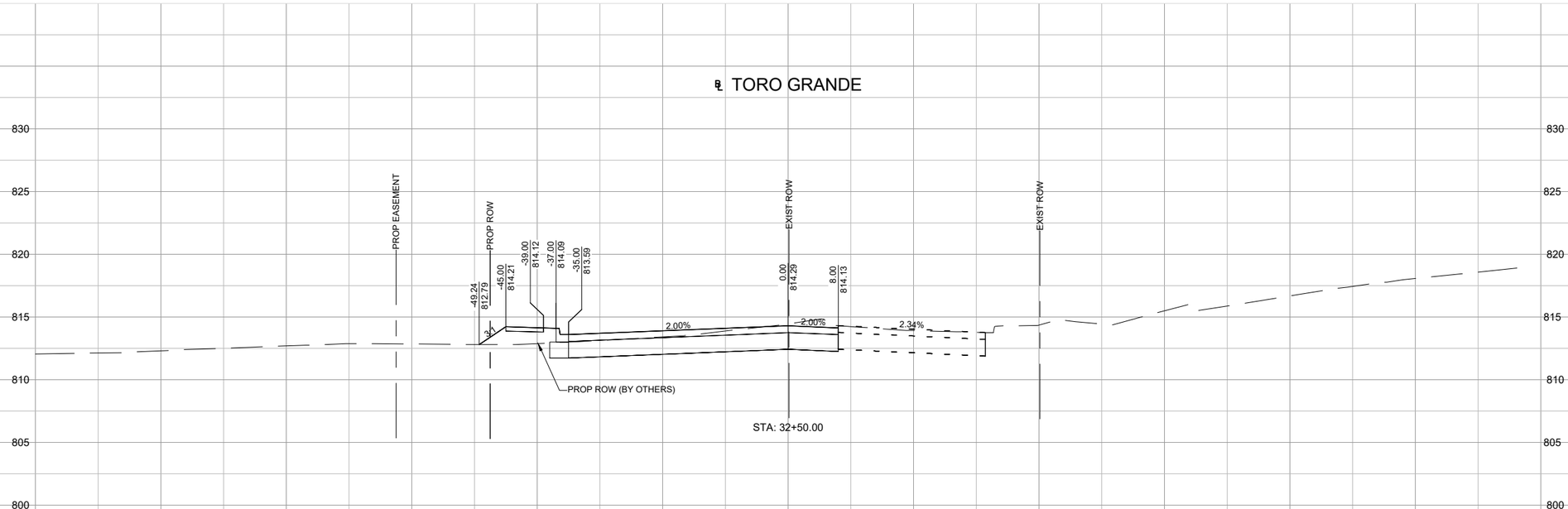
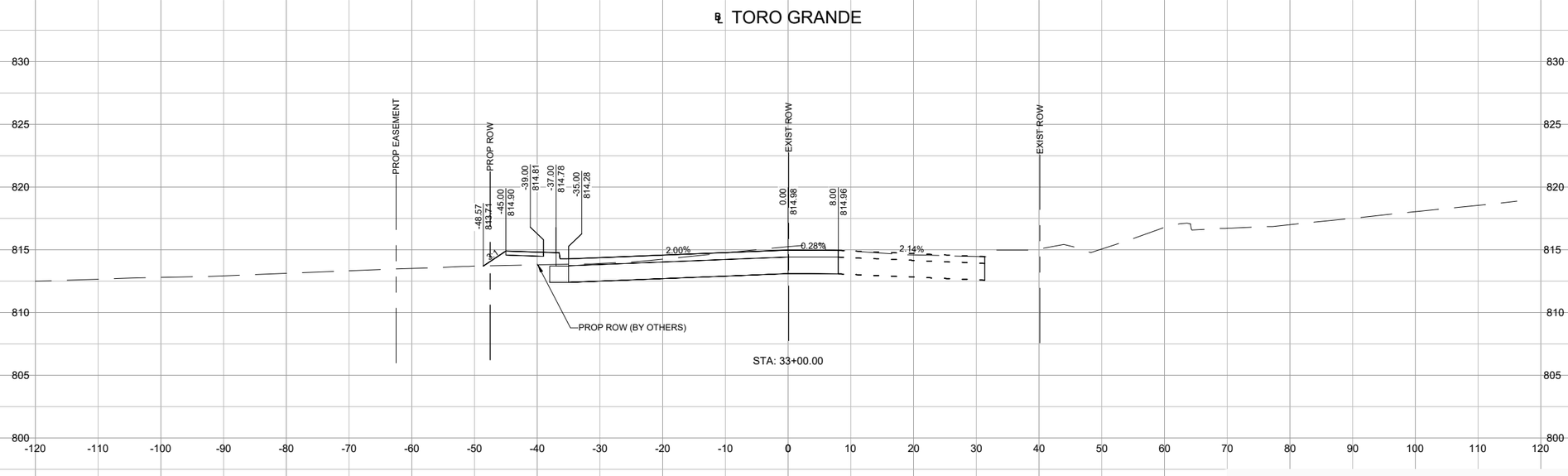
SHEET
XS-104

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-5 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN





NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 830
AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-6

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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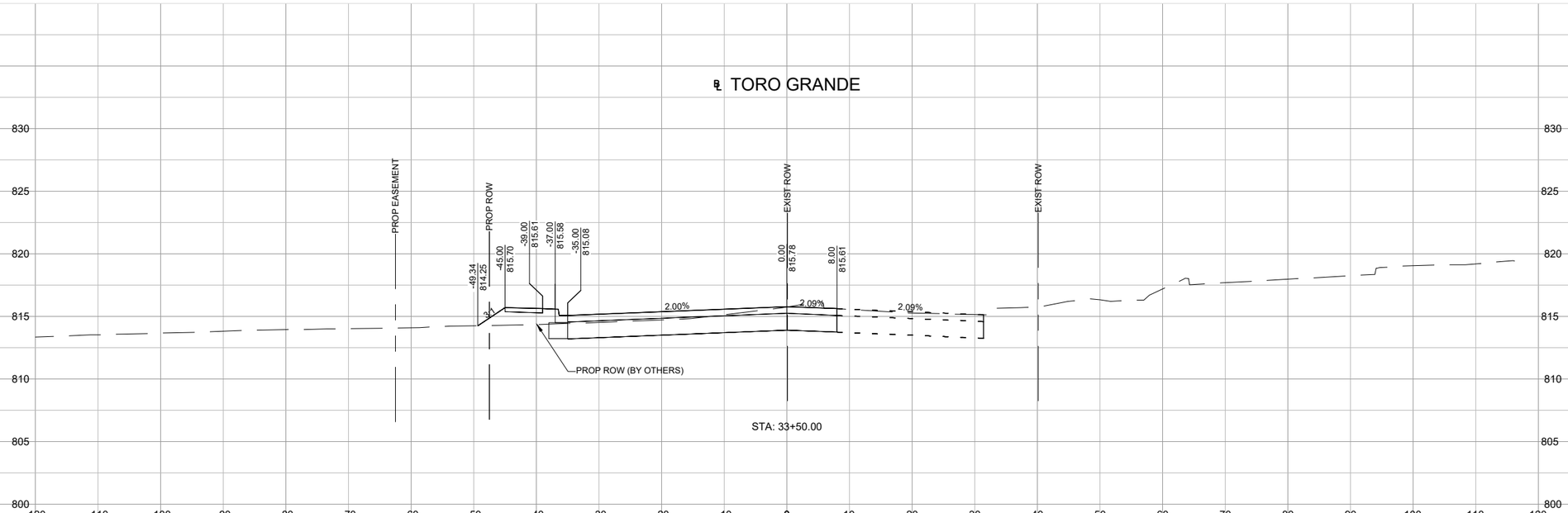
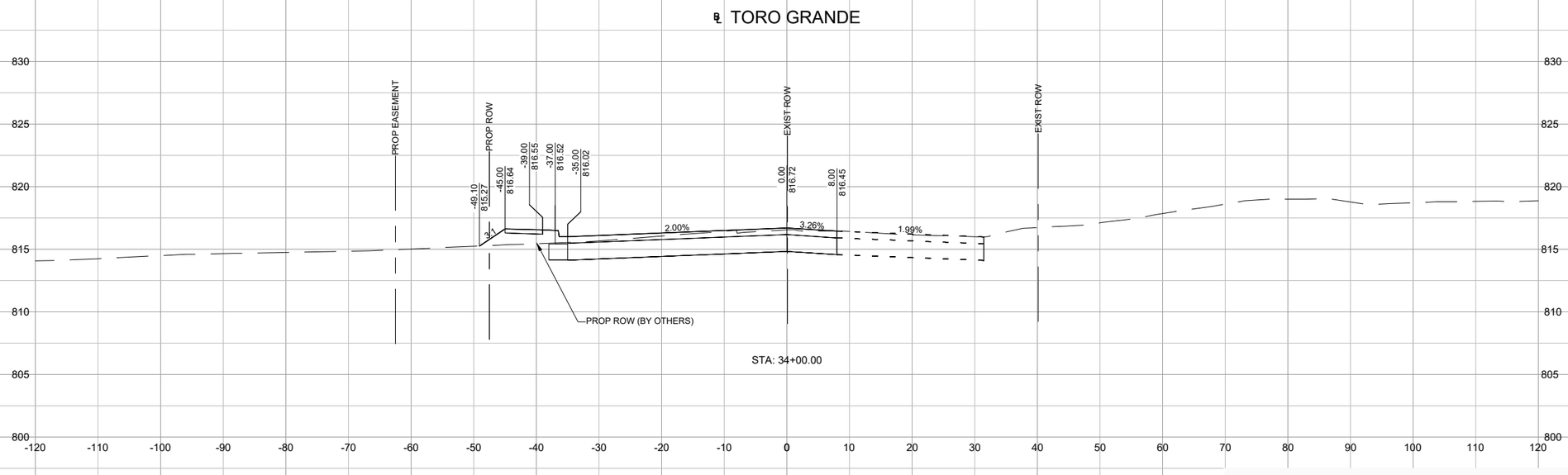
SHEET
XS-105

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-6 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN





NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 830
AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-7

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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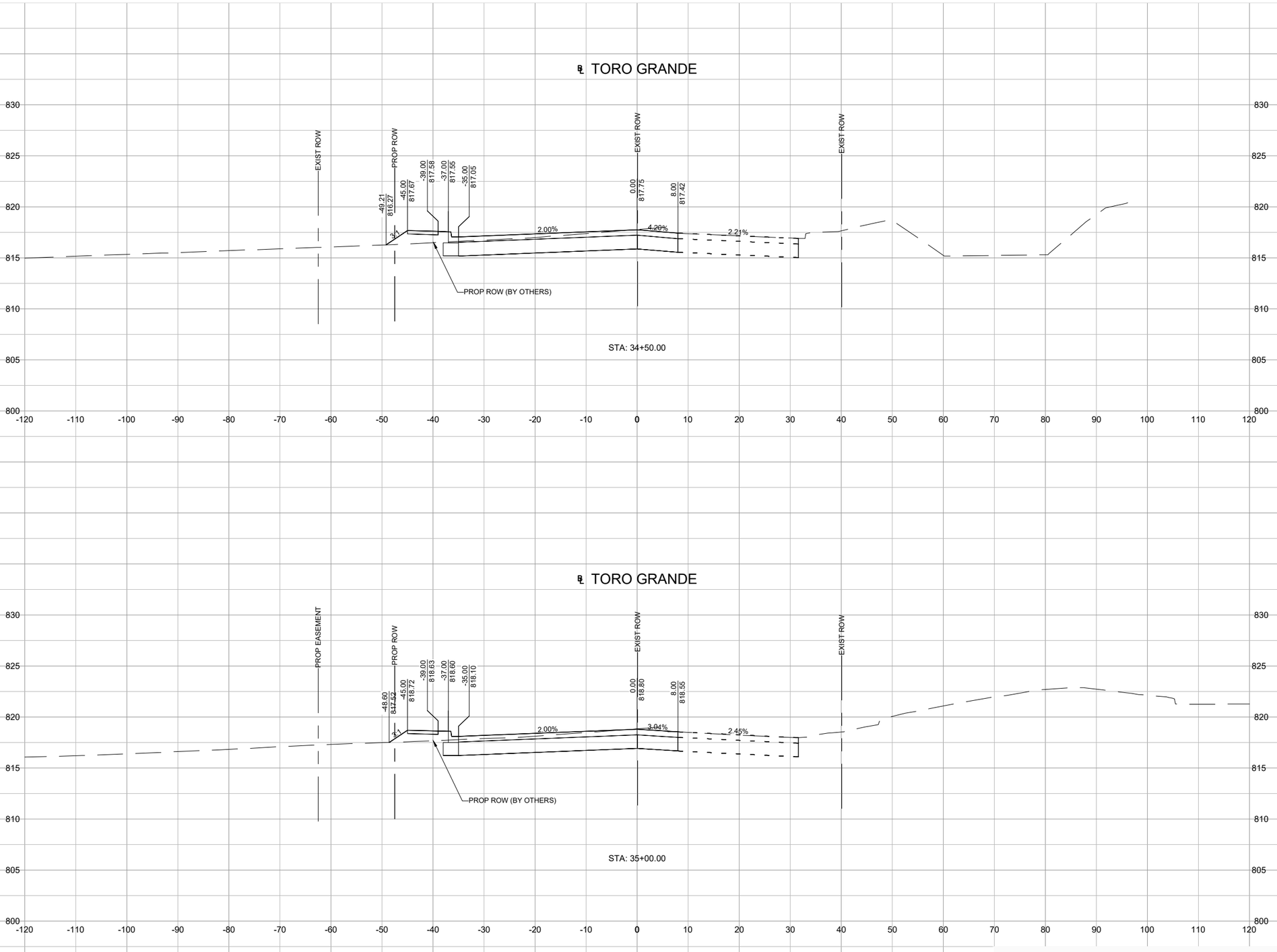
SHEET
XS-106

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-7 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 830
AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-8

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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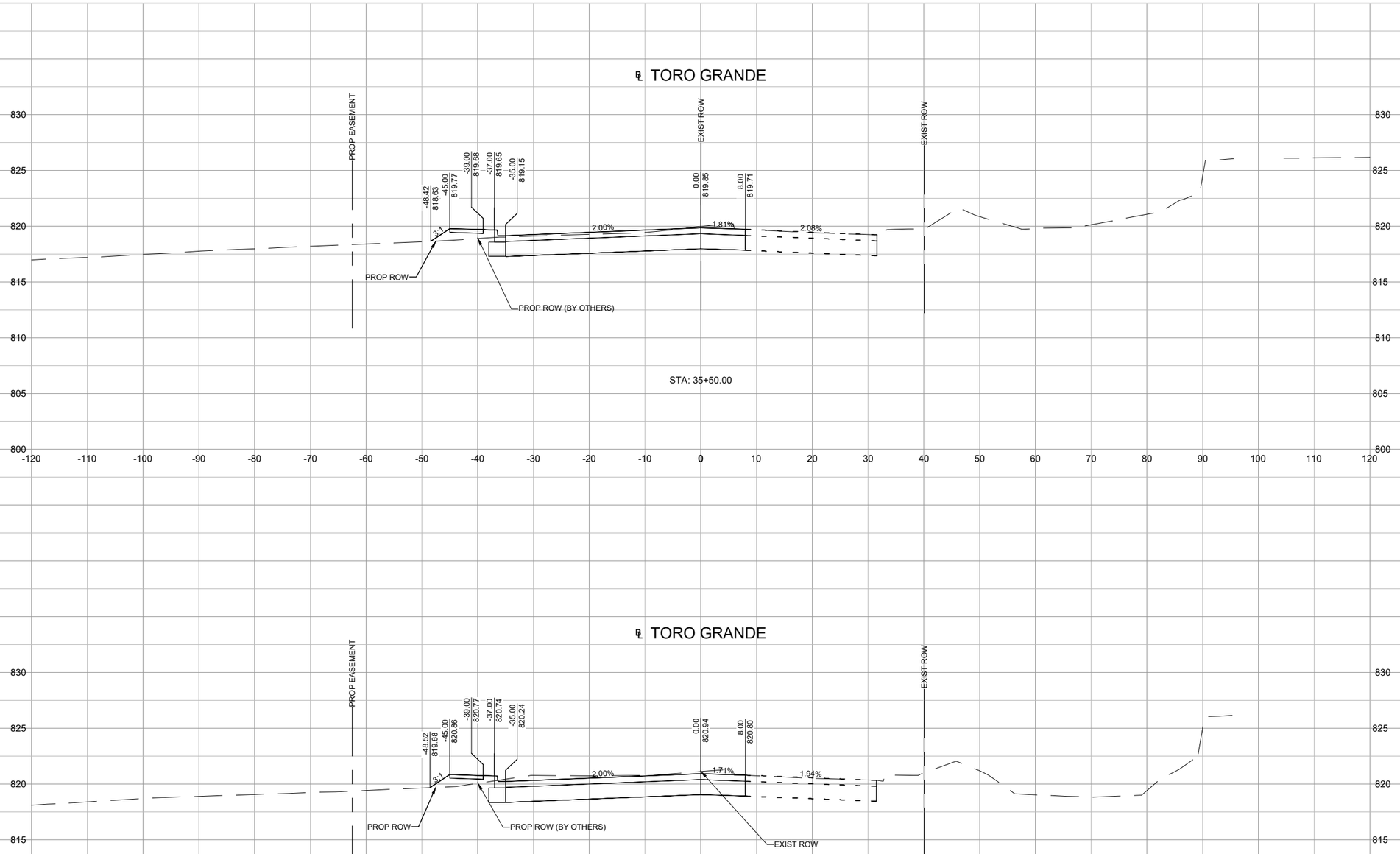
SHEET
XS-107

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-8 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046703
9001 N. MOPAC EXPRESSWAY, SUITE 830
AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-9

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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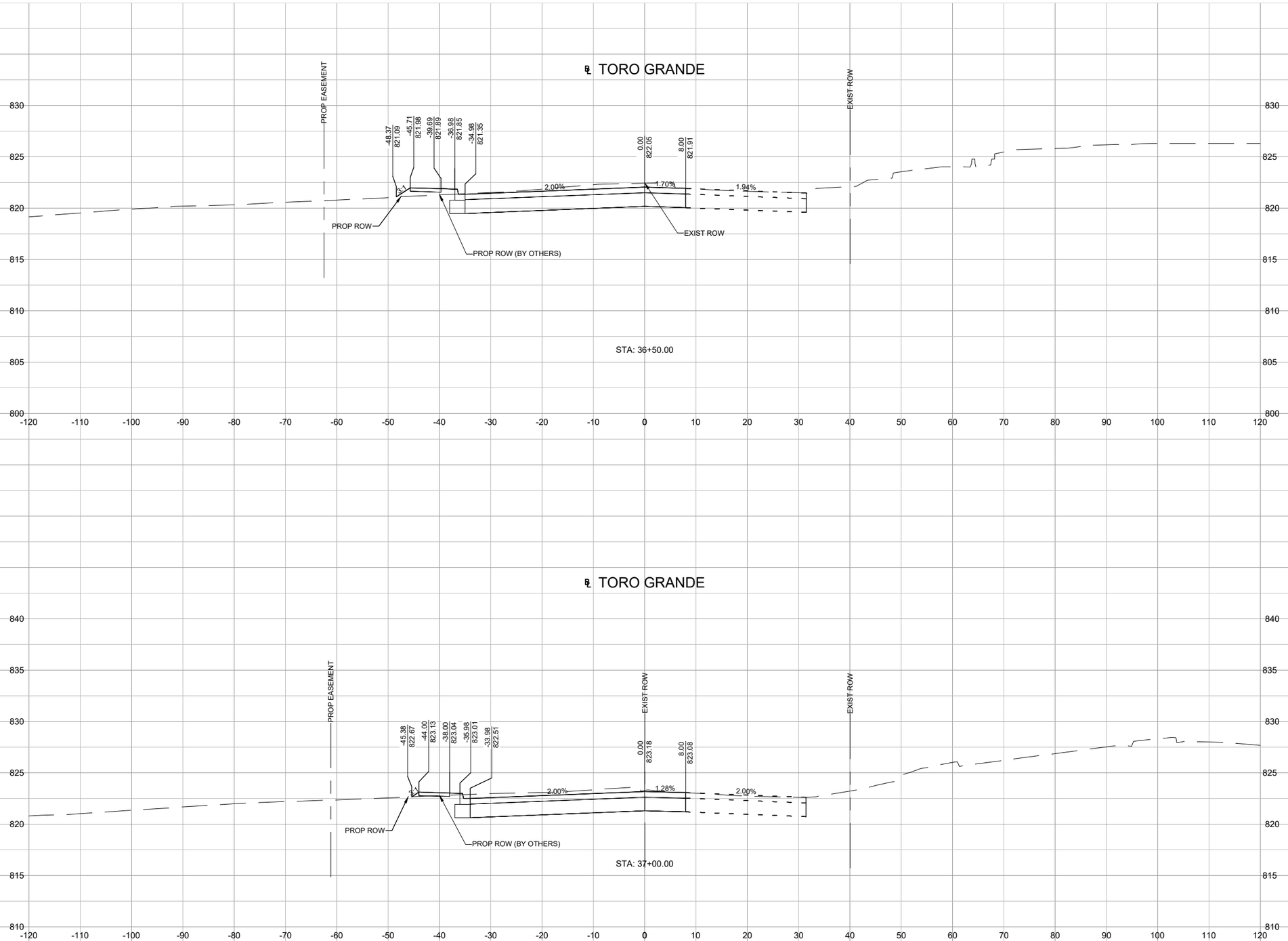
SHEET
XS-108

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-9 – Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN



NOTES:

1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 830
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TORO GRANDE NORTH-XSEC-10

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

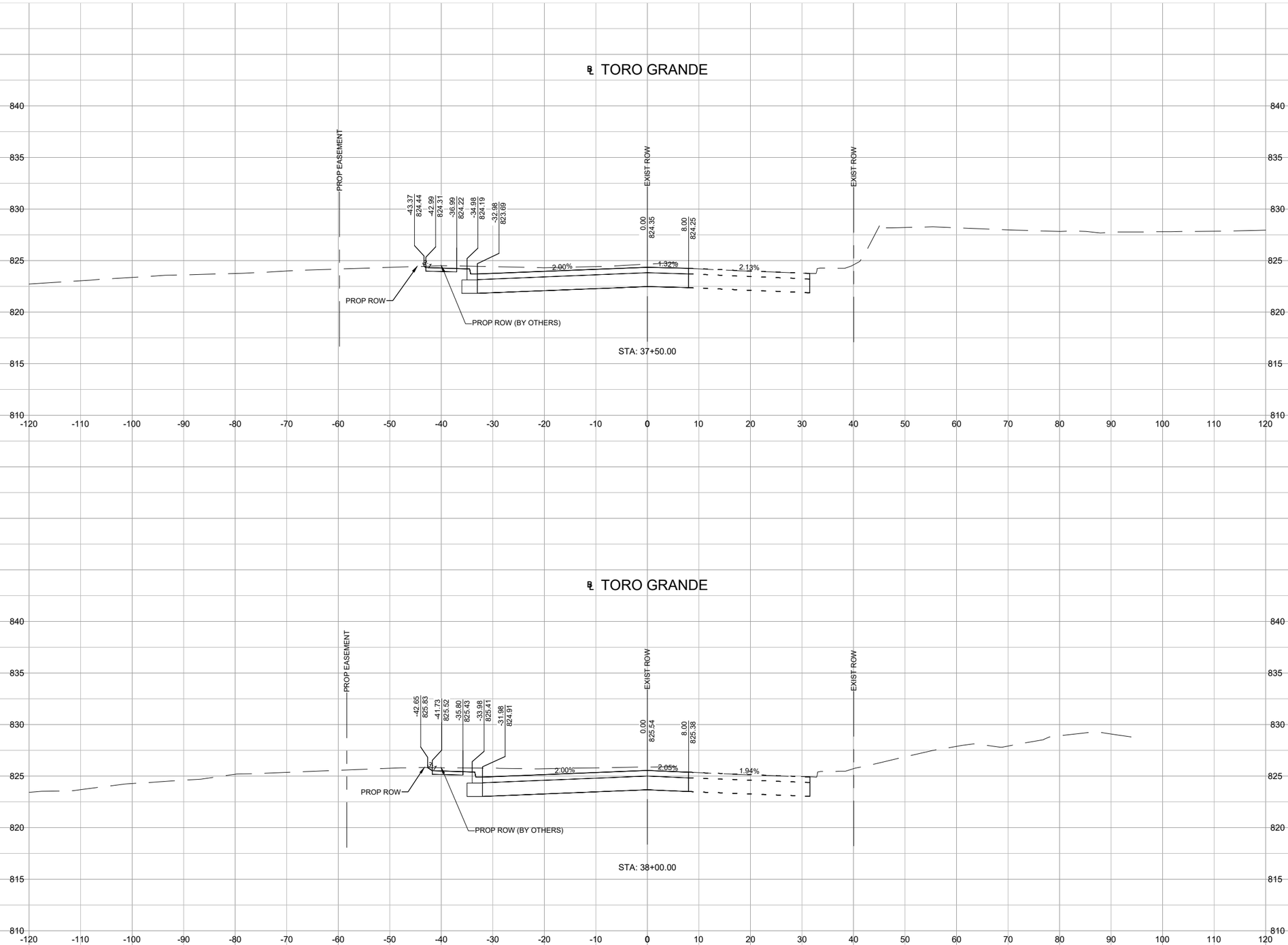
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-109

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD__REF\C-NP-CORR-XSEC-TGN.dwg — Tab: TORO GRANDE NORTH-XSEC-10 — Plotted: 2/12/2025 8:17 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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TORO GRANDE NORTH-XSEC-11

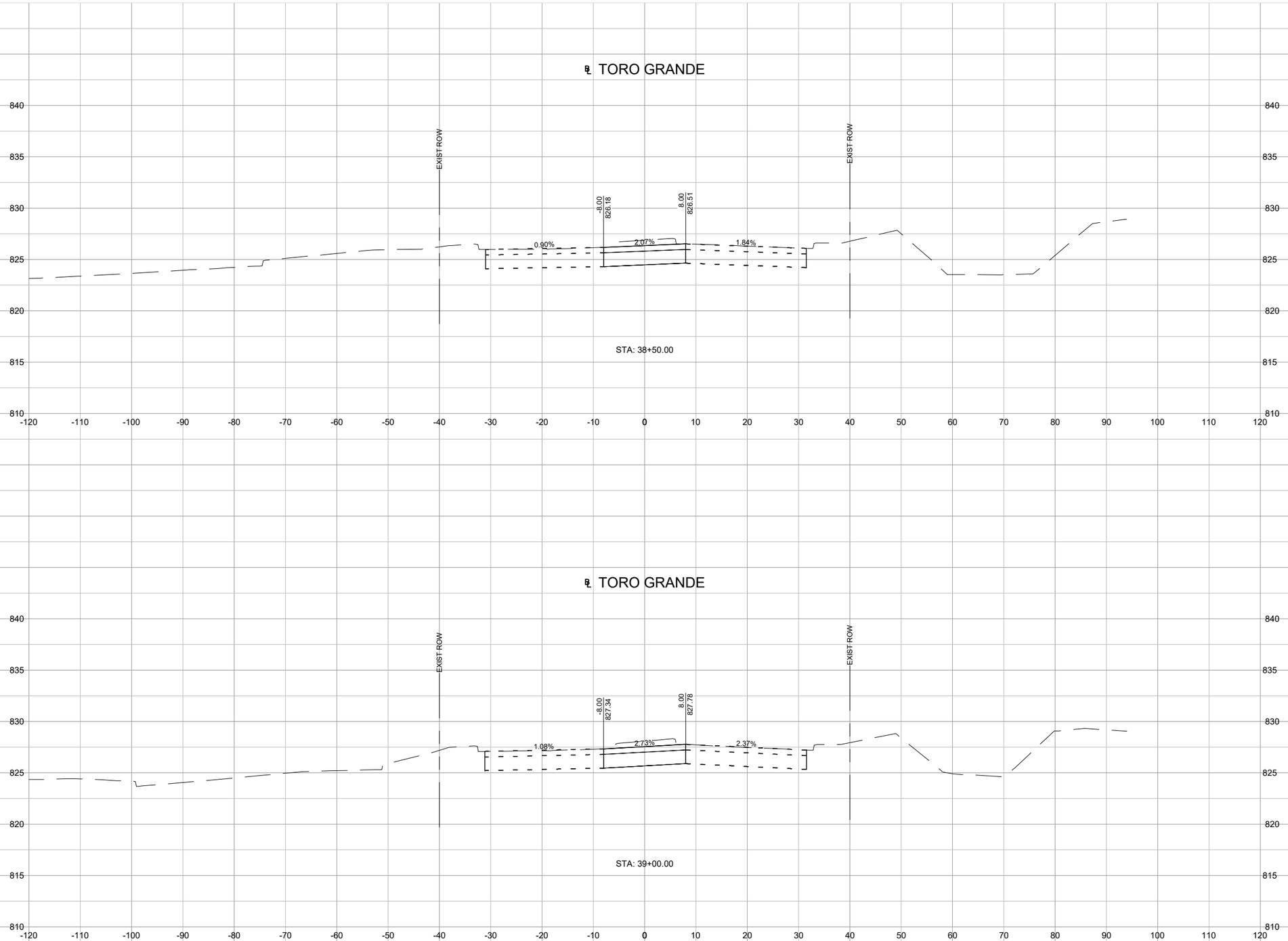
TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-110



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
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TORO GRANDE NORTH-XSEC-12

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

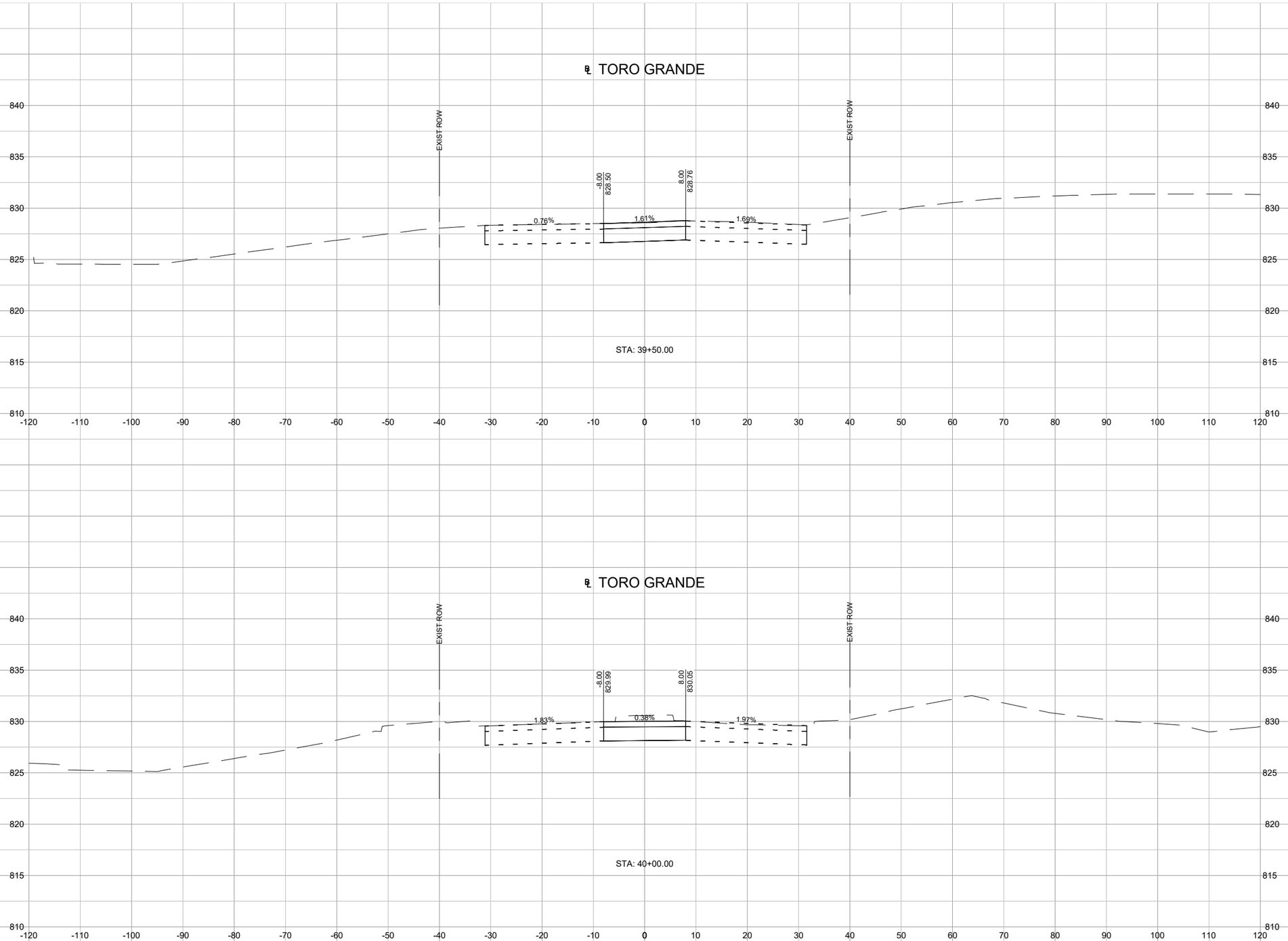
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-111

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD__REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-12 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
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AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-13

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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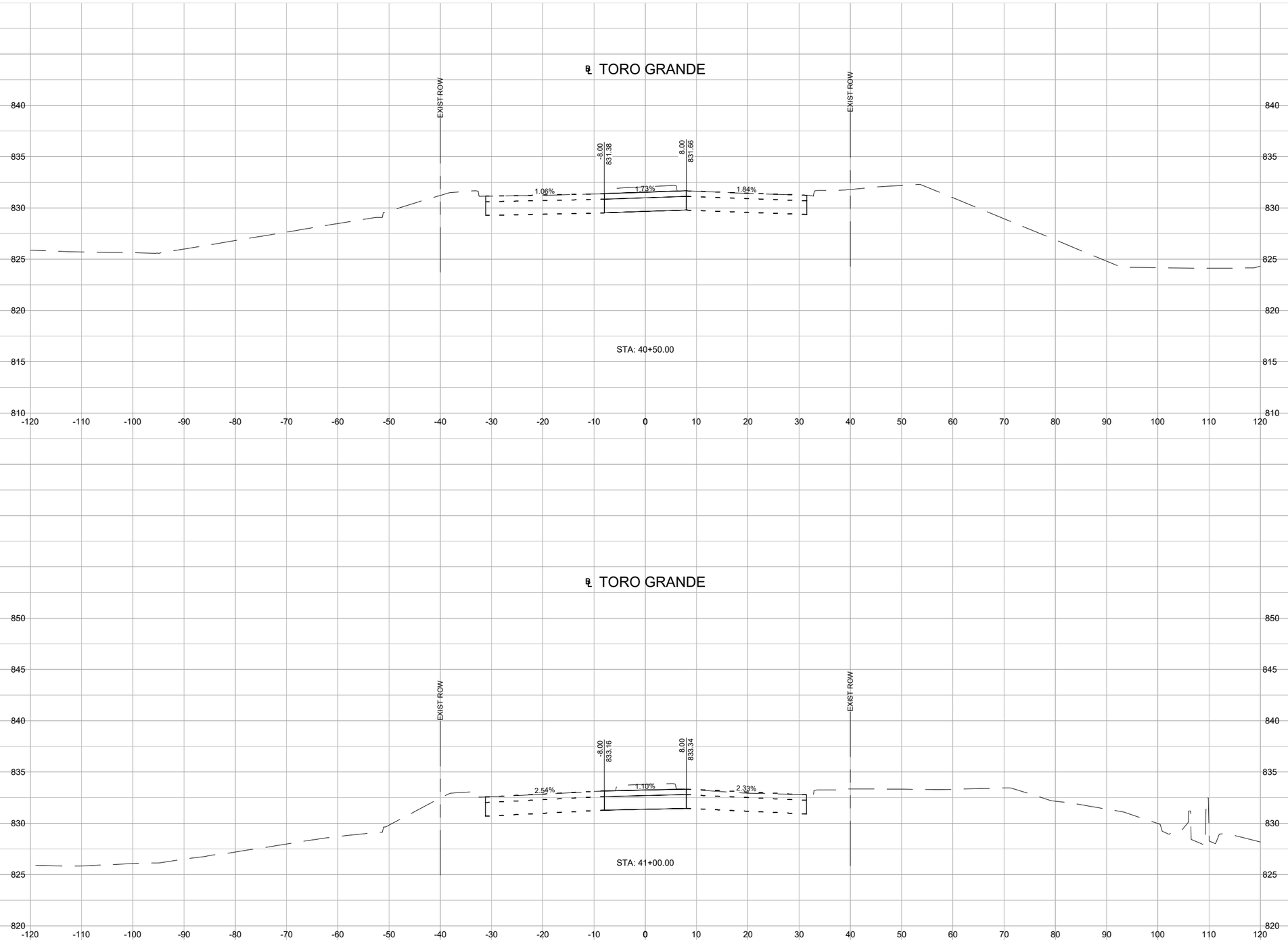
SHEET
XS-112

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-13 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
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AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-14

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

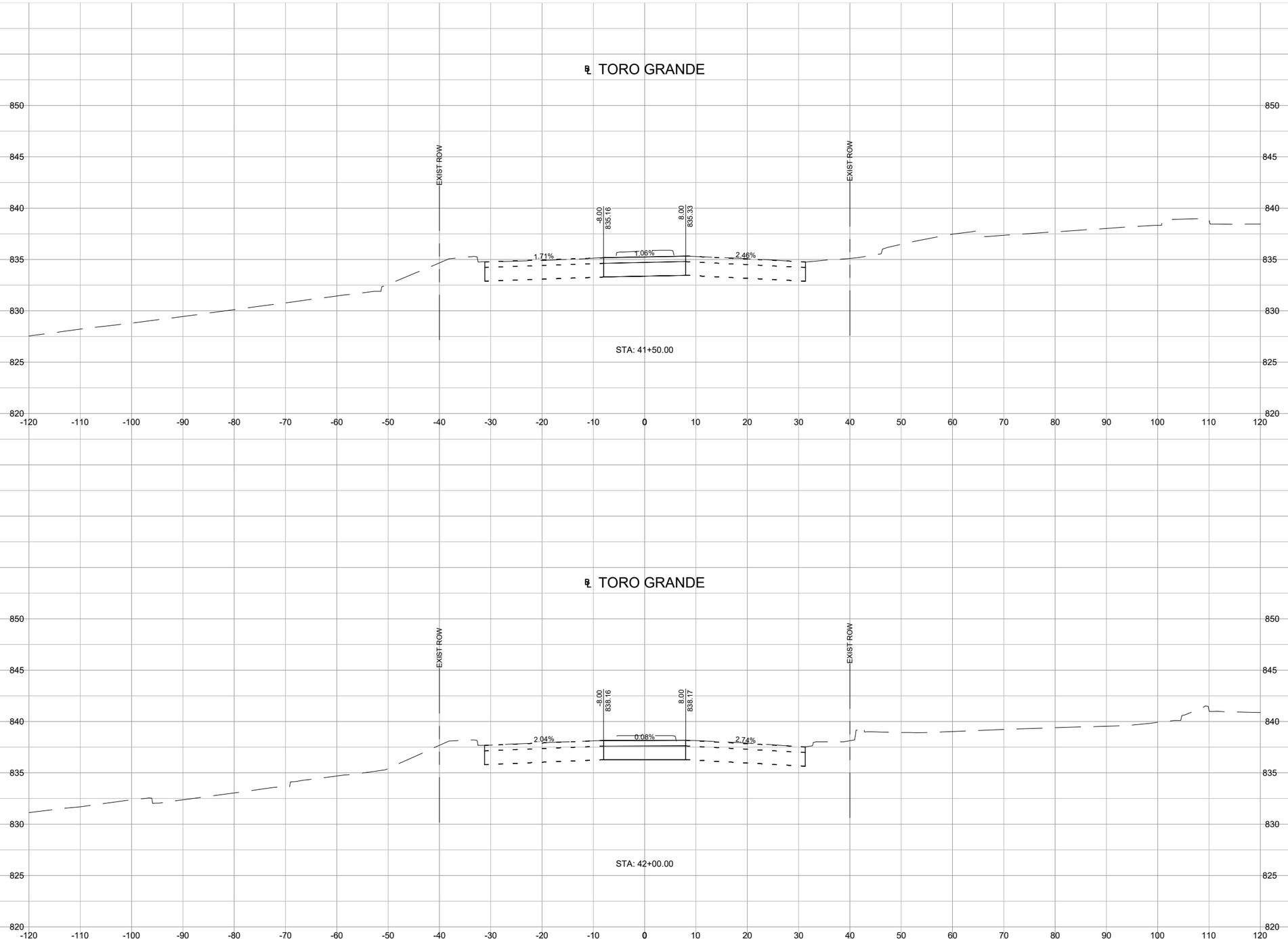
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-113

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-14 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
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REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
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AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-15

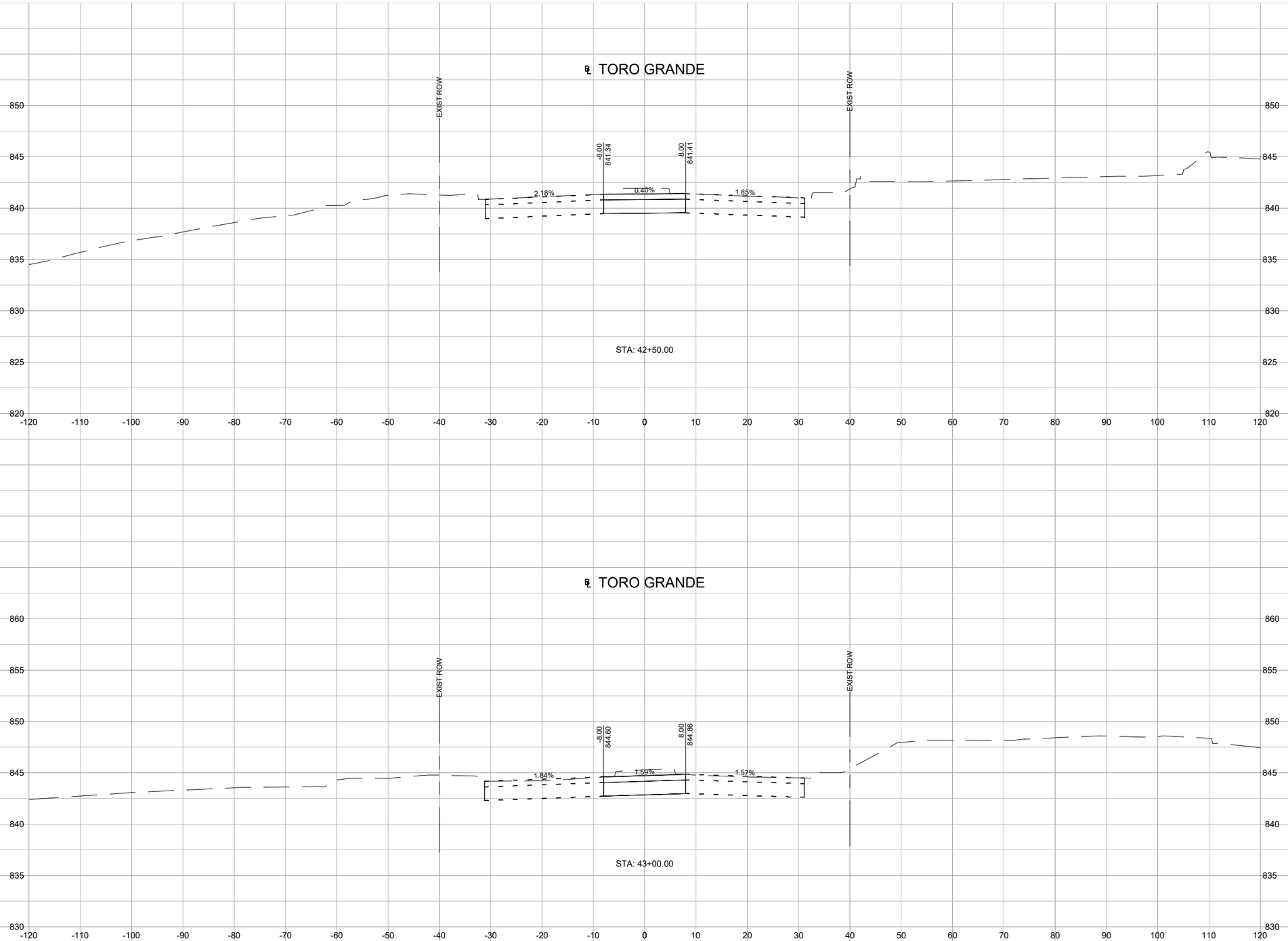
TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-114



NOTES:

1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
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AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-16

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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SHEET
XS-115

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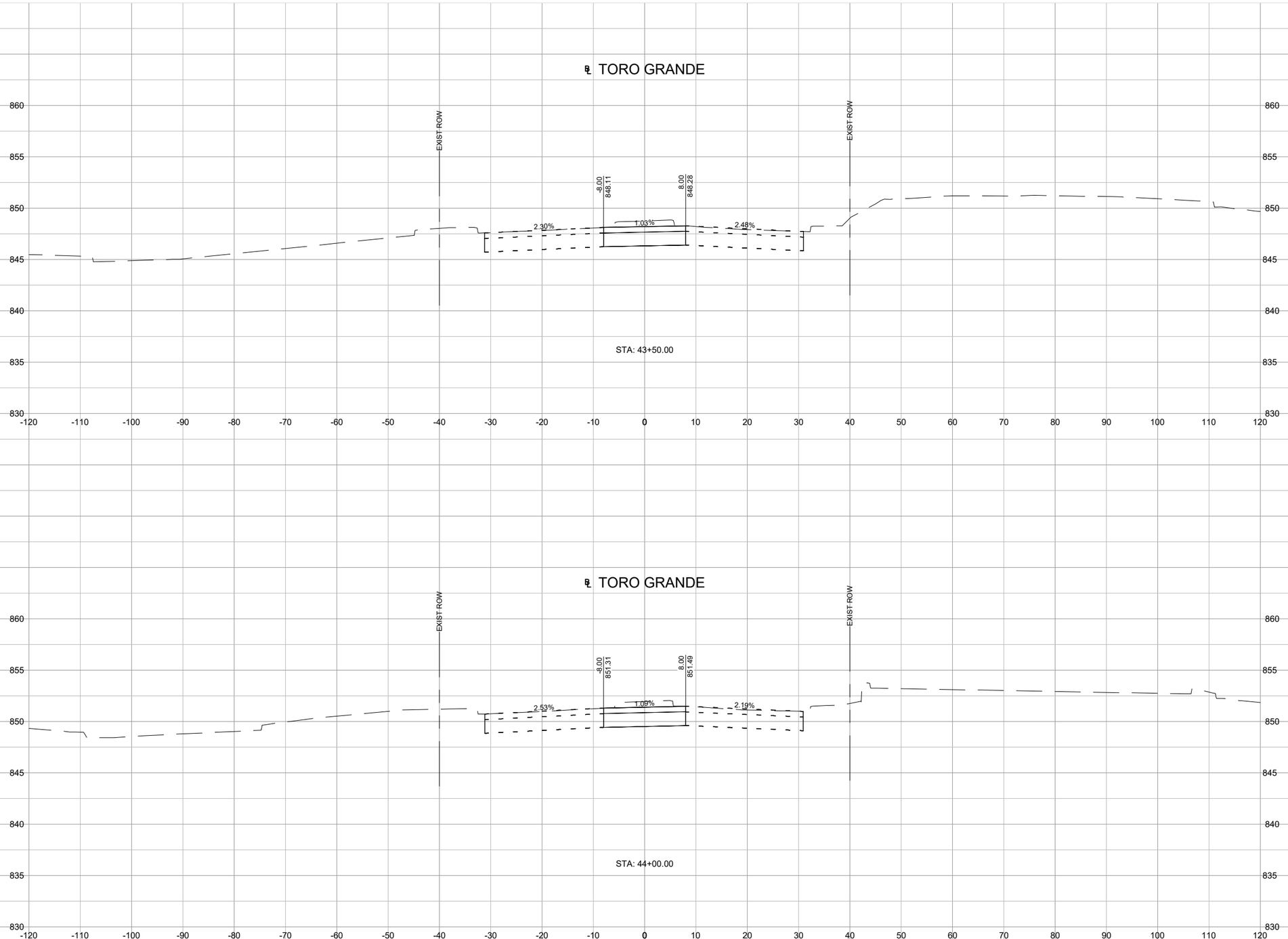

NOTES:
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REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 800
AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-17

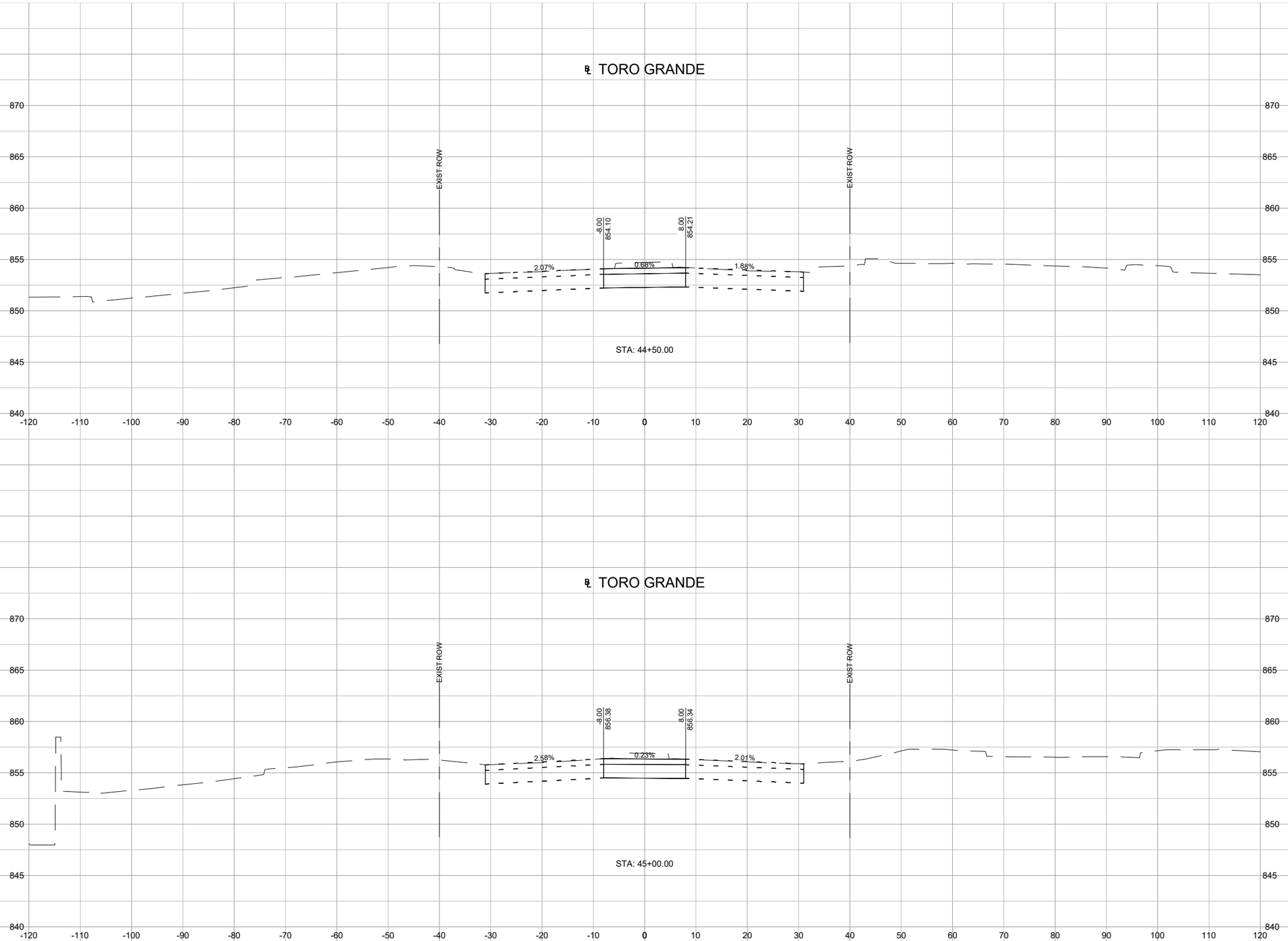
TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-116



NOTES:

1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 830
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
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TORO GRANDE NORTH-XSEC-18

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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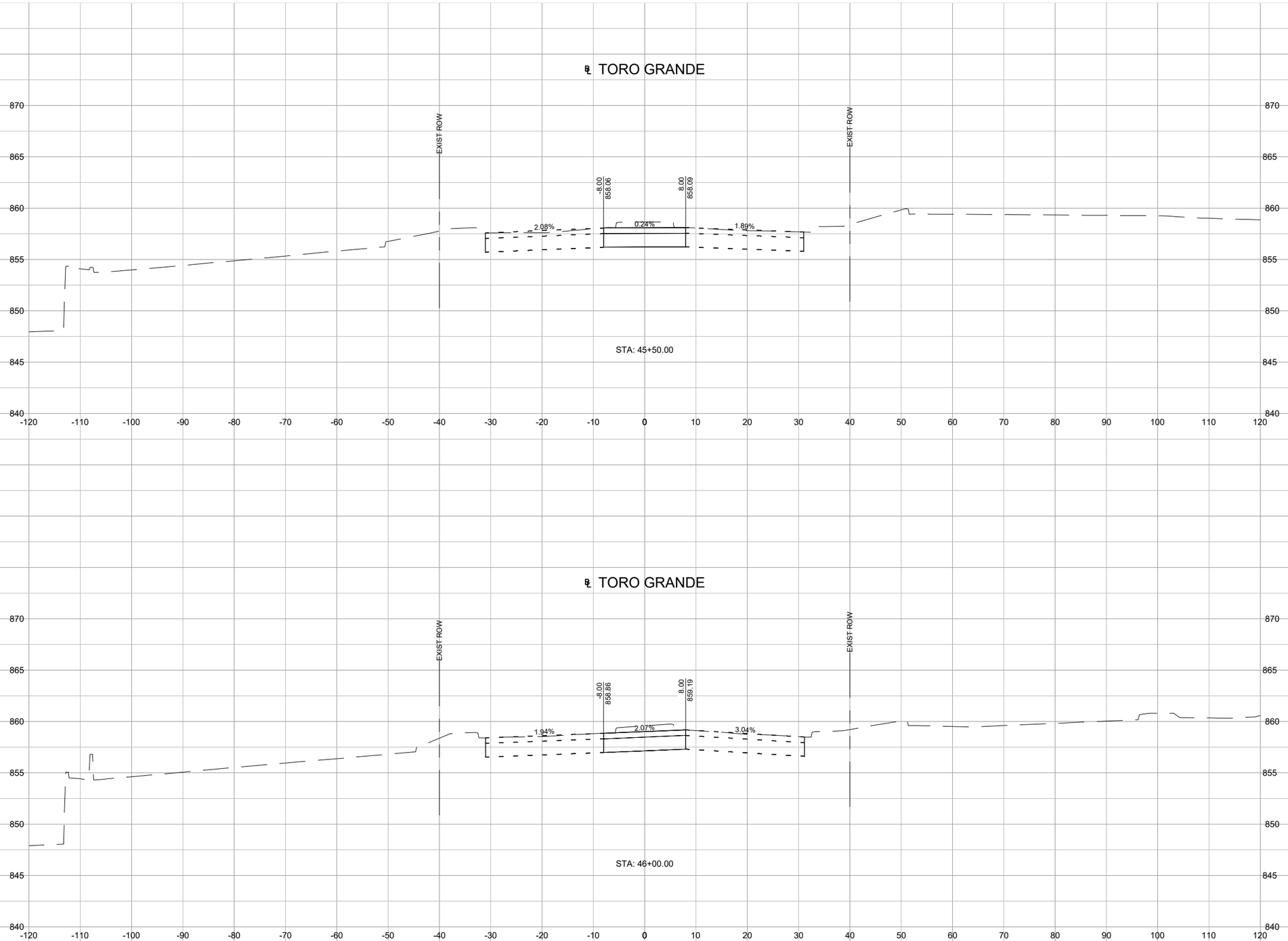
SHEET
XS-117

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-18 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

CobbFendley
TBPELS ENGINEERING FIRM NO. F-274, LAND SURVEYING FIRM NO. 10046701
9001 N. MOPAC EXPRESSWAY, SUITE 800
AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
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TORO GRANDE NORTH-XSEC-19

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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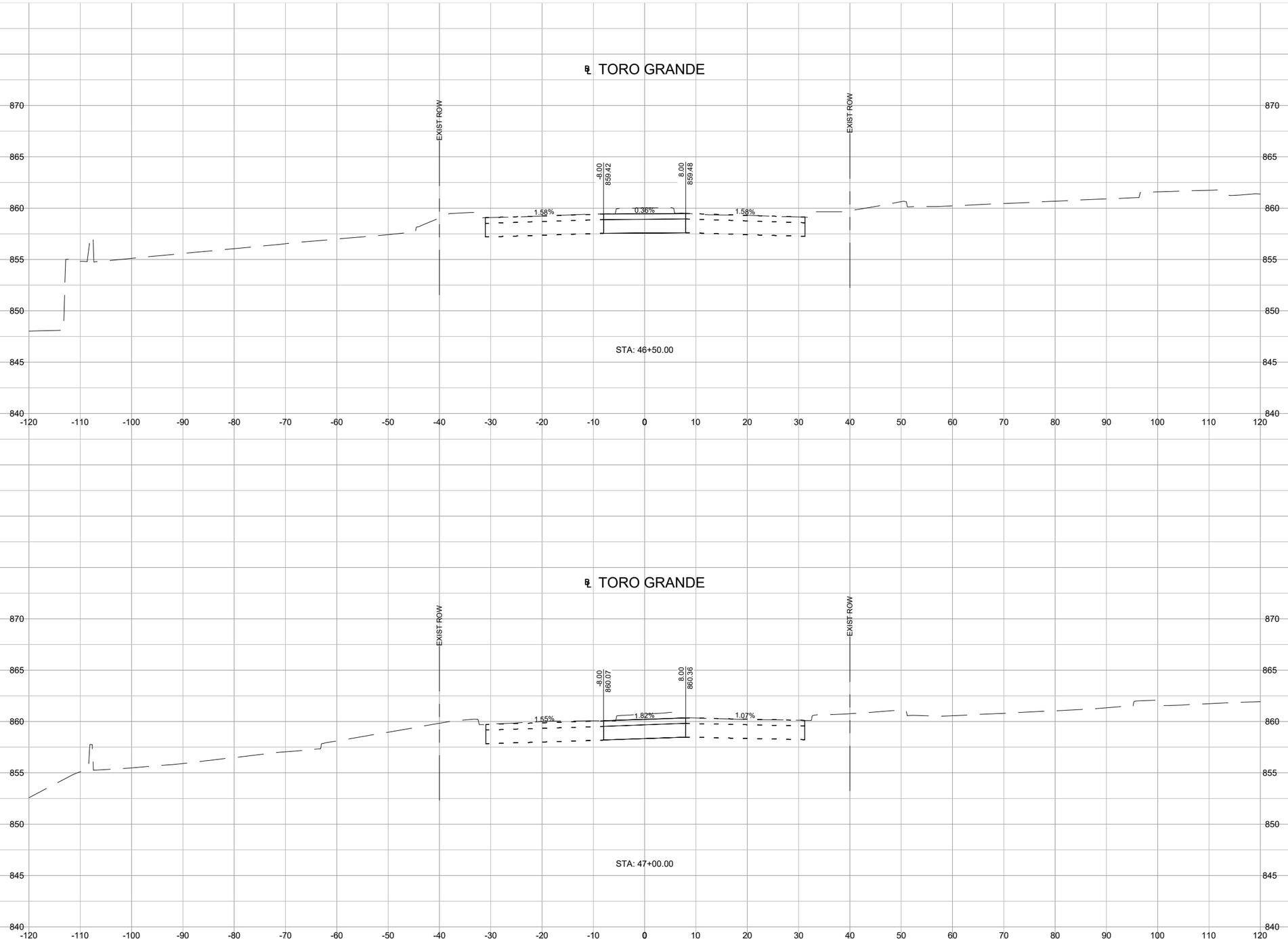
XS-118

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg — Tab: TORO GRANDE NORTH-XSEC-19 — Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
1. EXISTING ROAD CROSS SECTION SHOWN FOR REFERENCE

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AUSTIN, TEXAS 78759
512.834.9789 | FAX 512.834.7727
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TORO GRANDE NORTH-XSEC-20

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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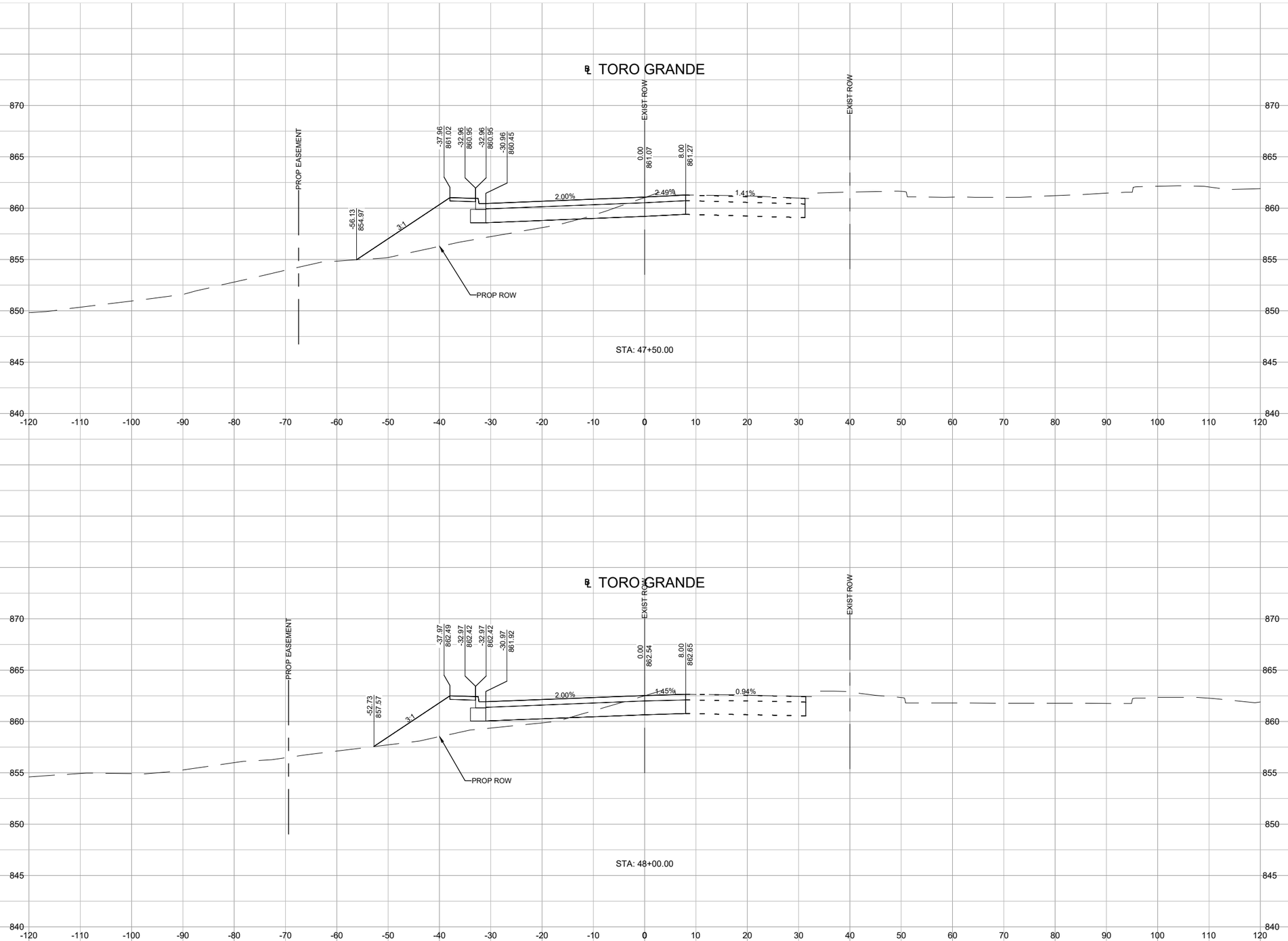
XS-119

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD__REF\C-NP-CORR-XSEC-TGN.dwg — Tab: TORO GRANDE NORTH-XSEC-20 — Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
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TORO GRANDE NORTH-XSEC-21

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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XS-220

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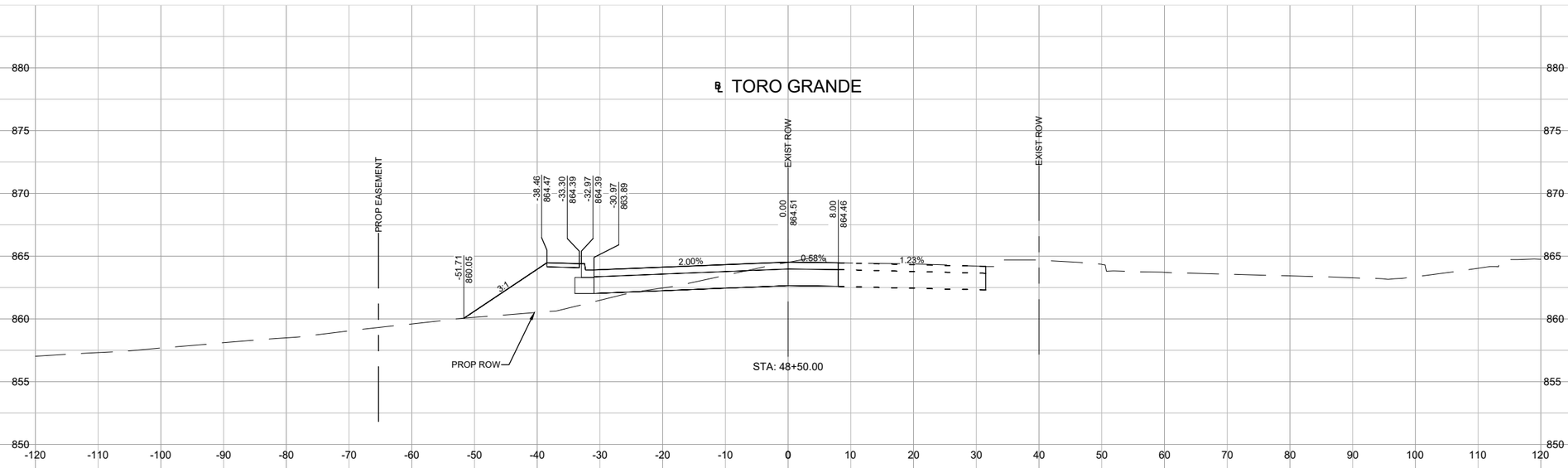

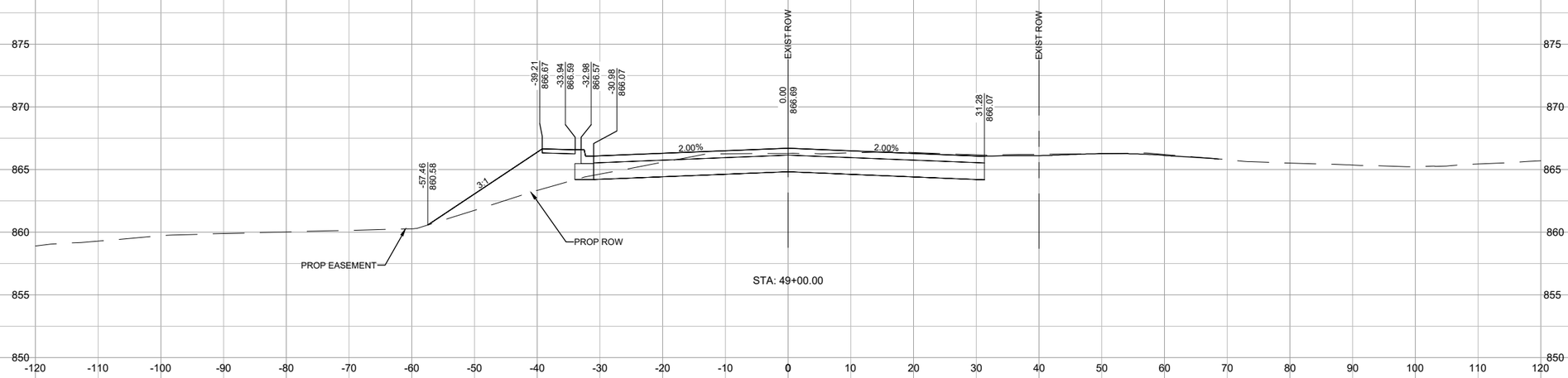

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TORO GRANDE NORTH-XSEC-22

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

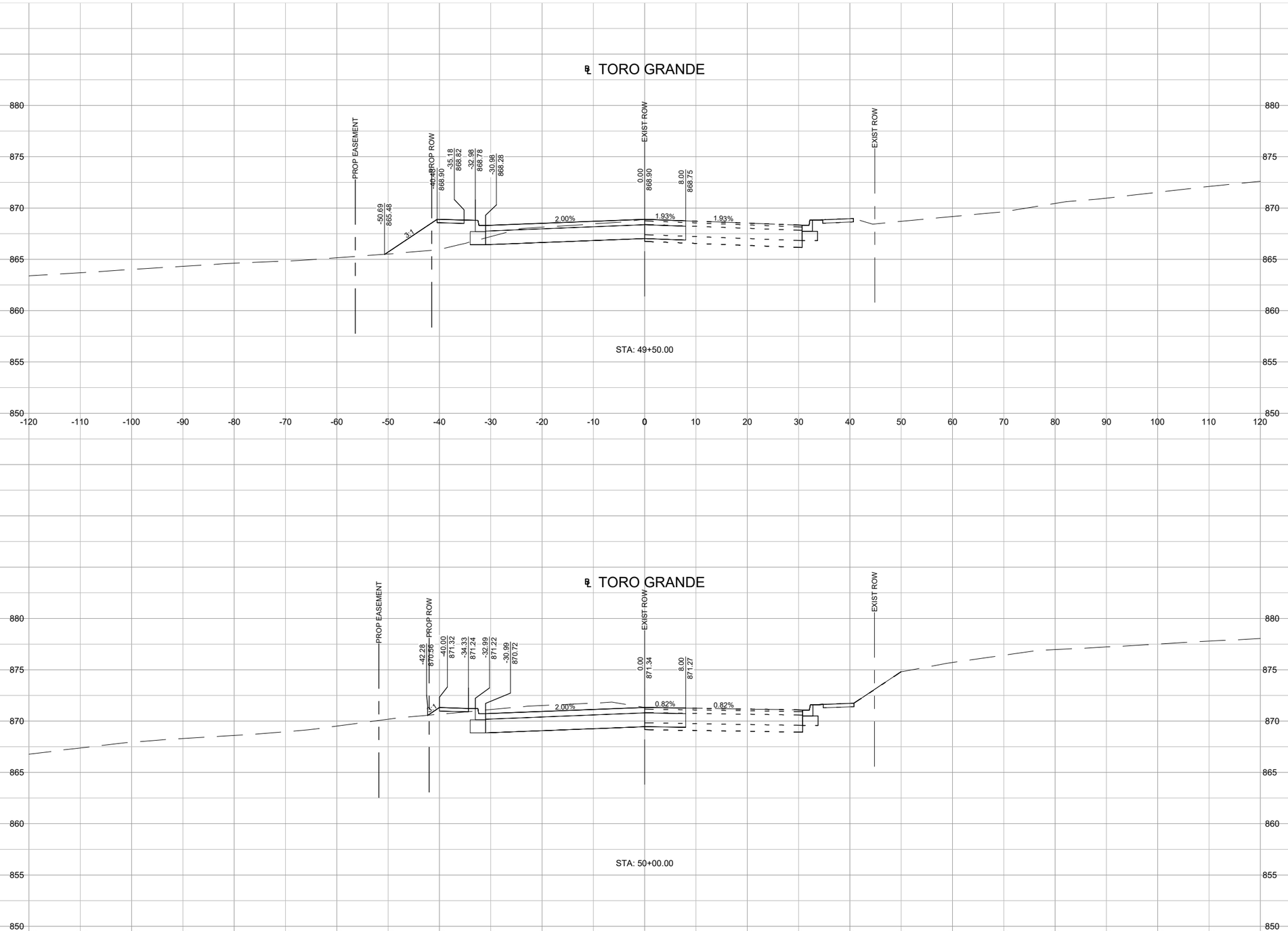
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-221

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg - Tab: TORO GRANDE NORTH-XSEC-22 - Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



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TORO GRANDE NORTH-XSEC-23

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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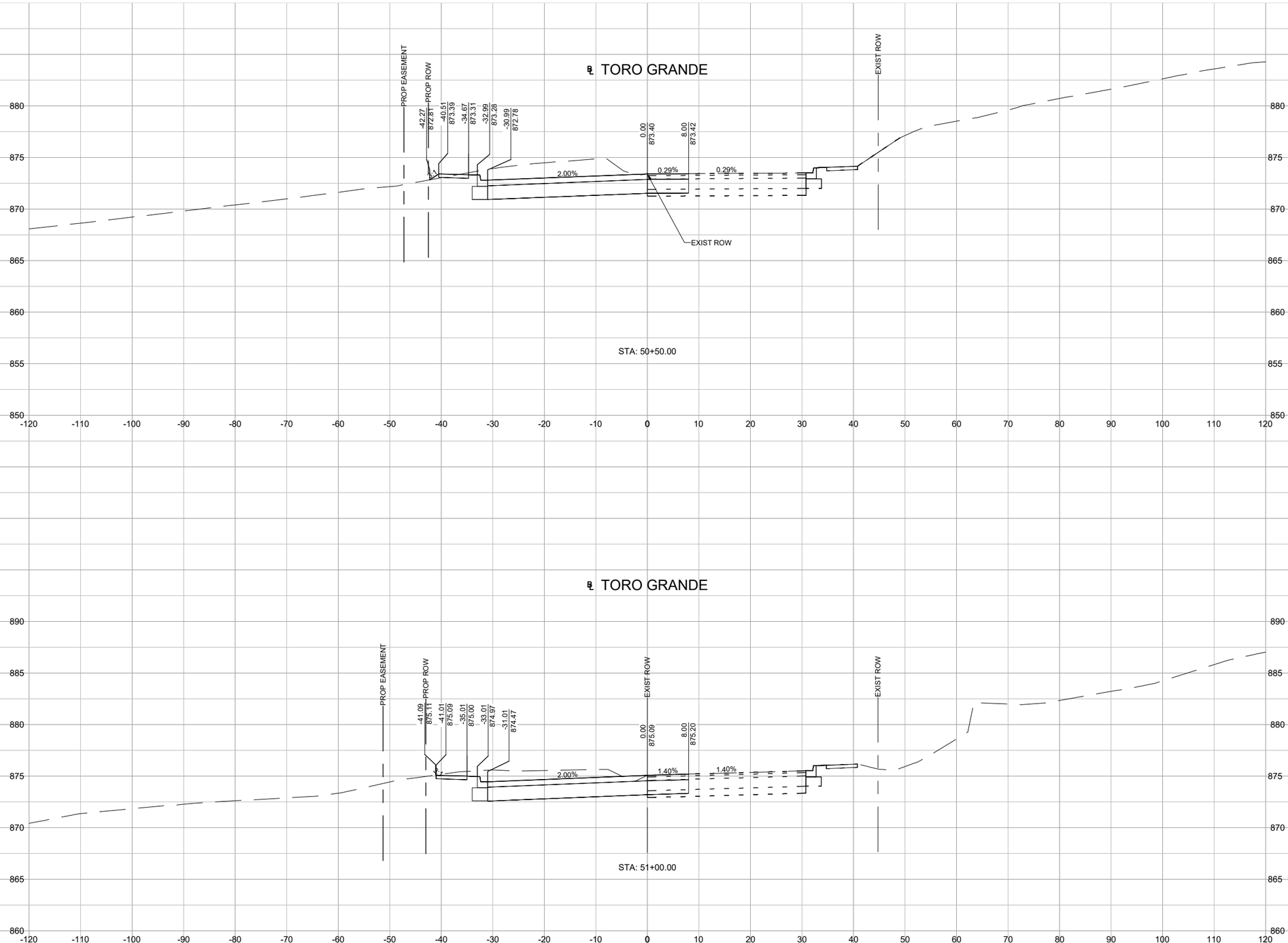
Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg - Tab: TORO GRANDE NORTH-XSEC-23 - Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
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TORO GRANDE NORTH-XSEC-24

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

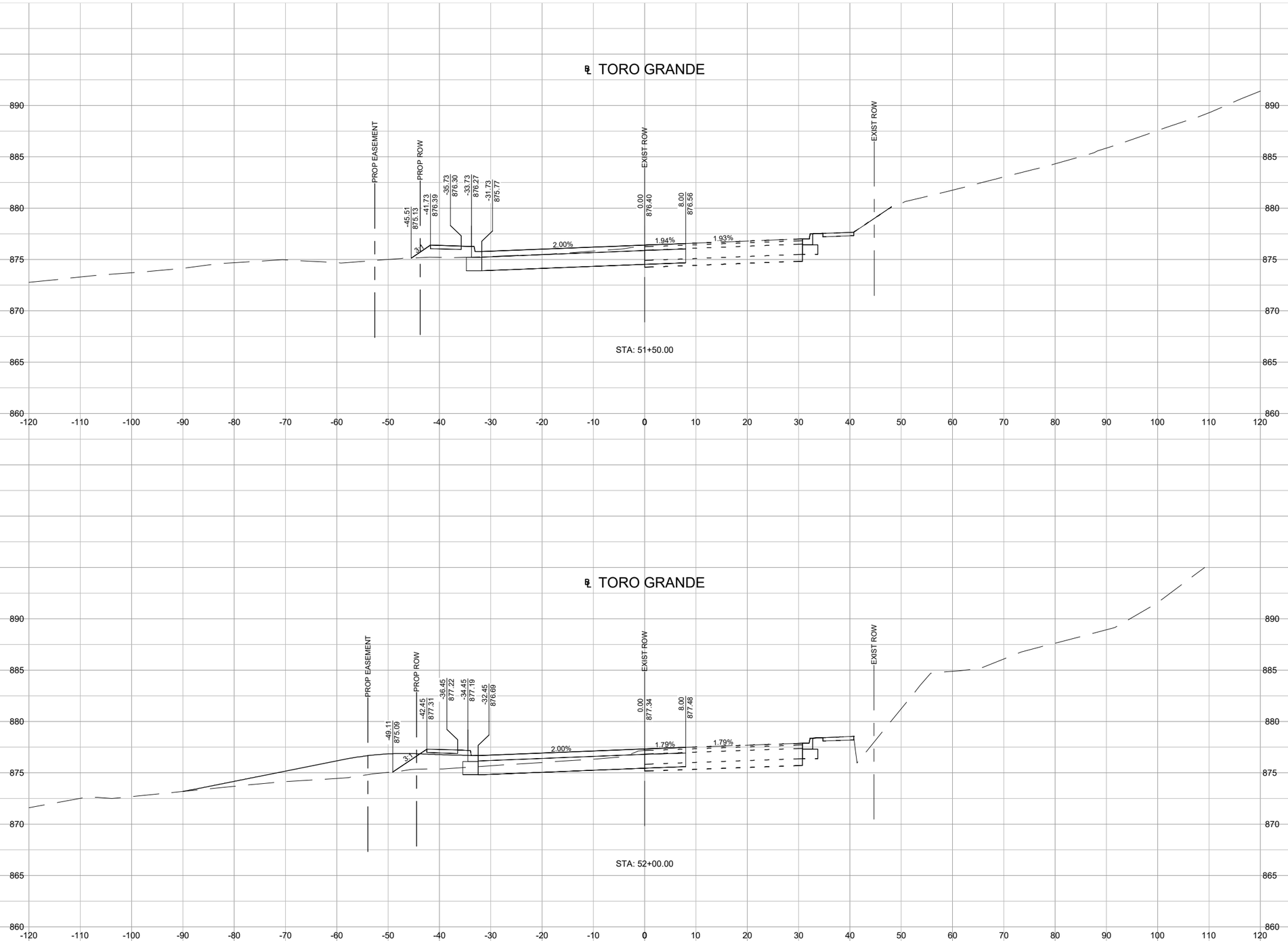
CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

SHEET
XS-223

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg — Tab: TORO GRANDE NORTH-XSEC-24 — Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



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TORO GRANDE NORTH-XSEC-25

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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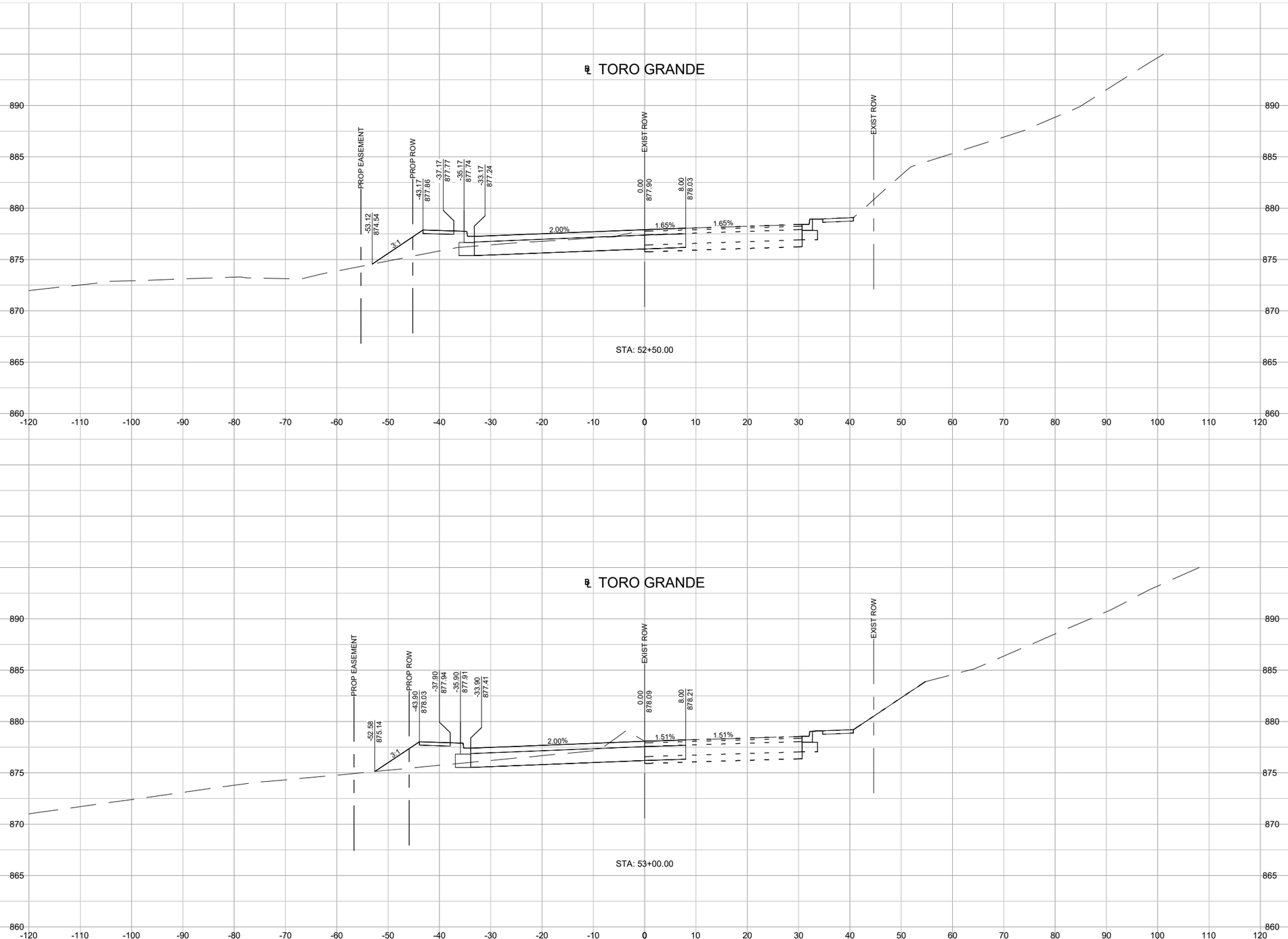
XS-224

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD__REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-25 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
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TORO GRANDE NORTH-XSEC-26

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
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PROFESSIONAL ENGINEER
2/27/2025

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XS-225

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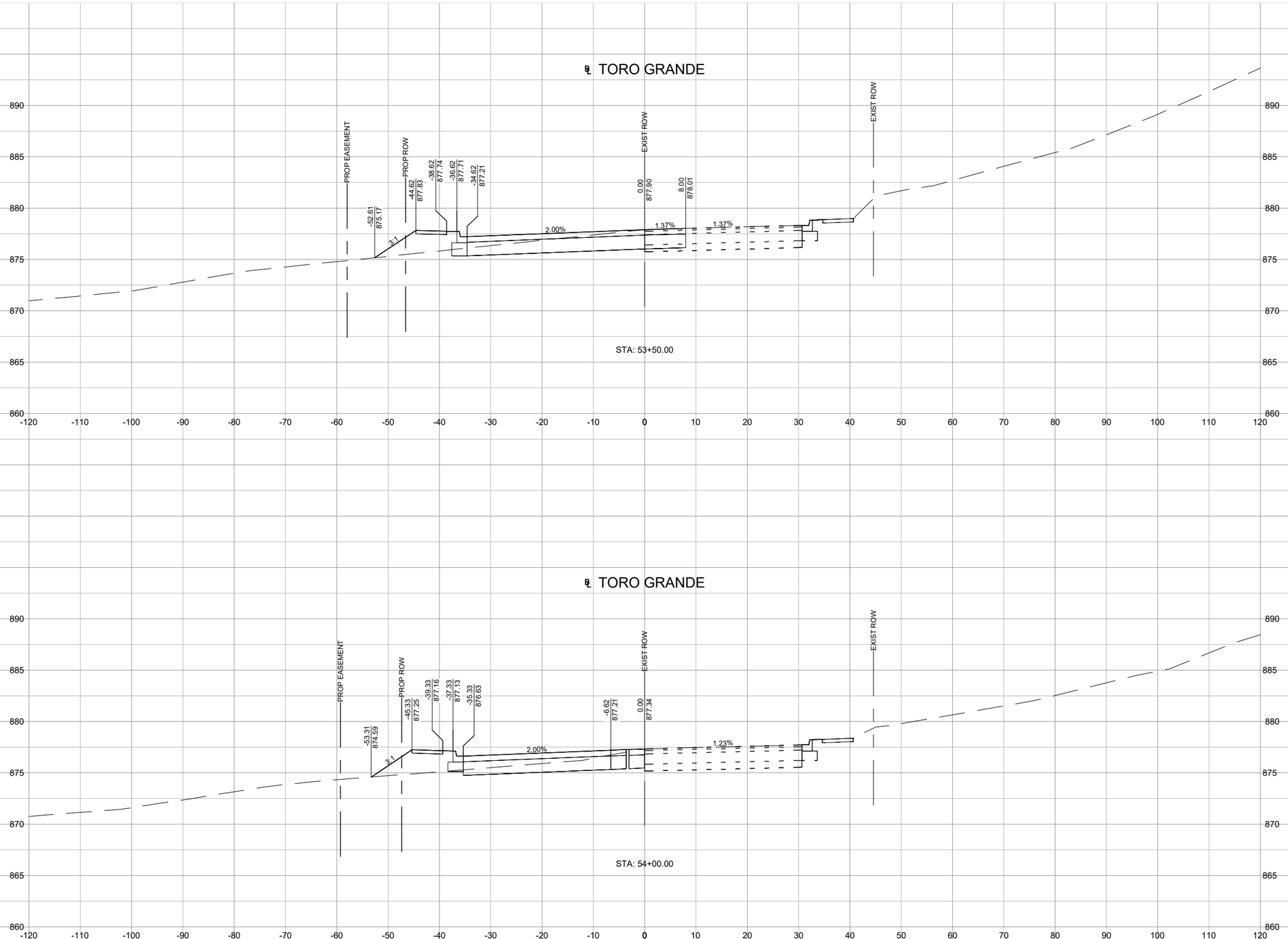

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TORO GRANDE NORTH-XSEC-27

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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XS-226

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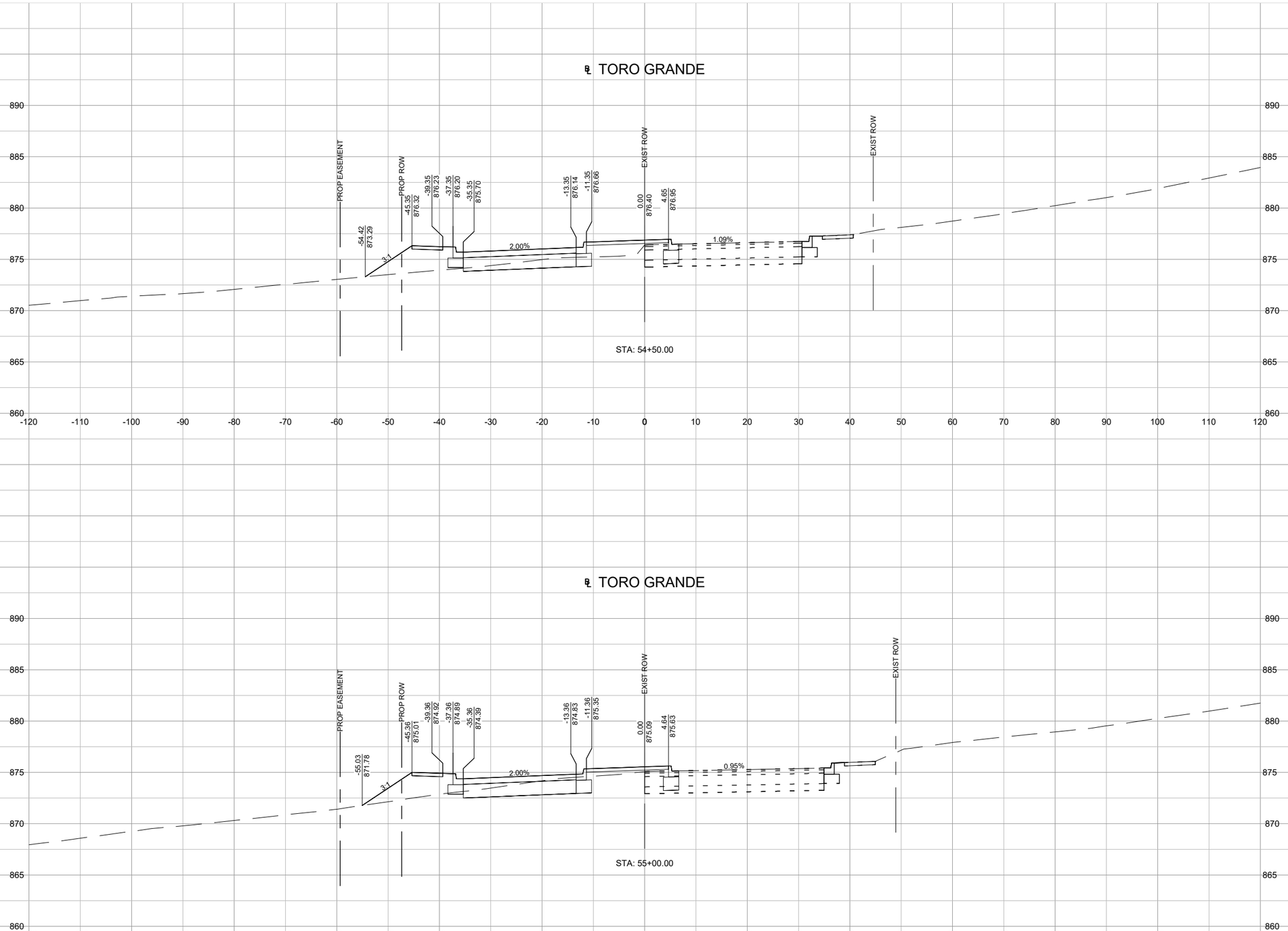

NOTES:
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REV. NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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AUSTIN, TEXAS 78759
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TORO GRANDE NORTH-XSEC-28

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
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2/27/2025

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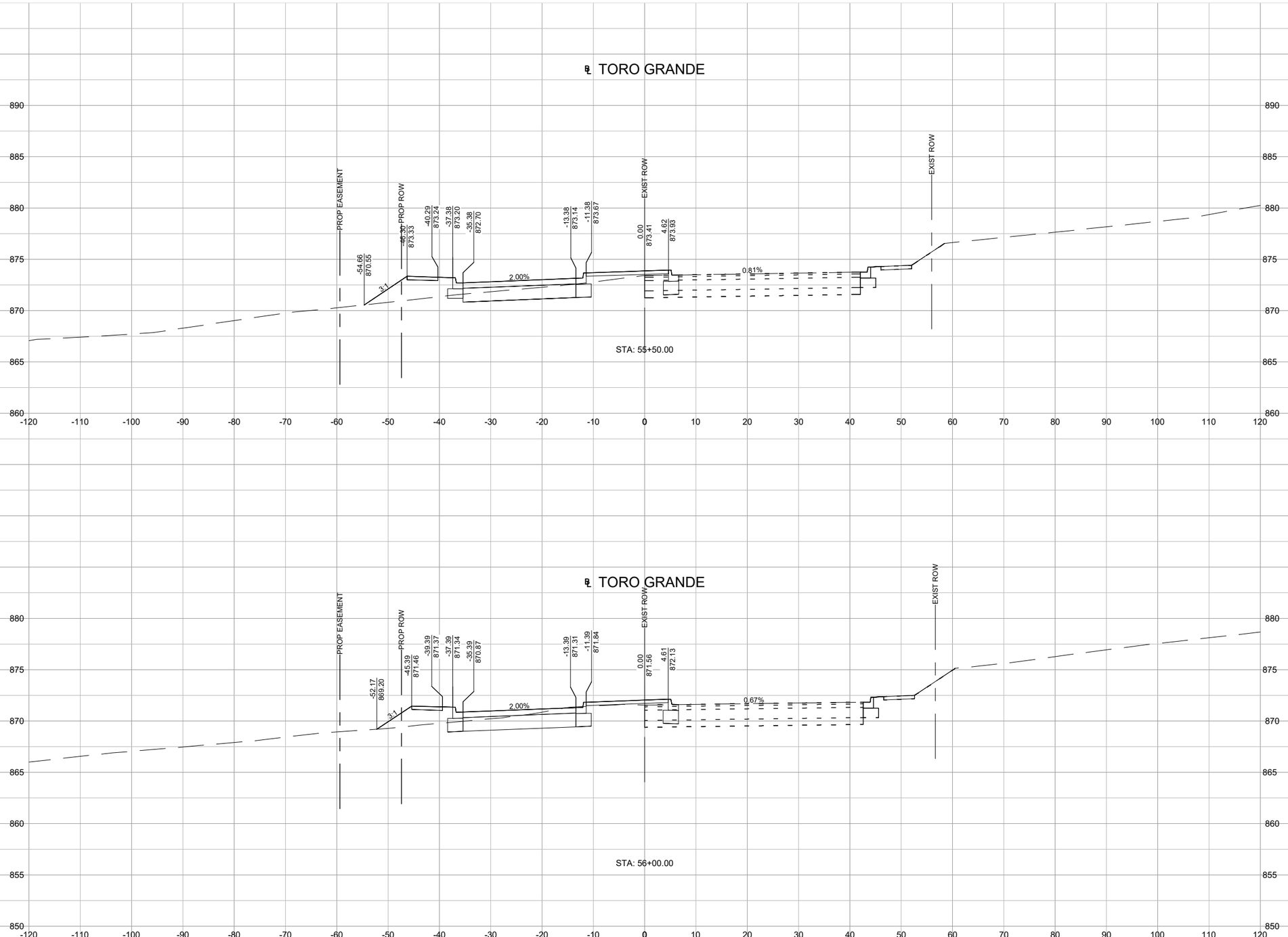
XS-227

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD__REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-28 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



NOTES:
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REV NO.	REVISION DESCRIPTION	APPROVED BY:	DATE

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TORO GRANDE NORTH-XSEC-29

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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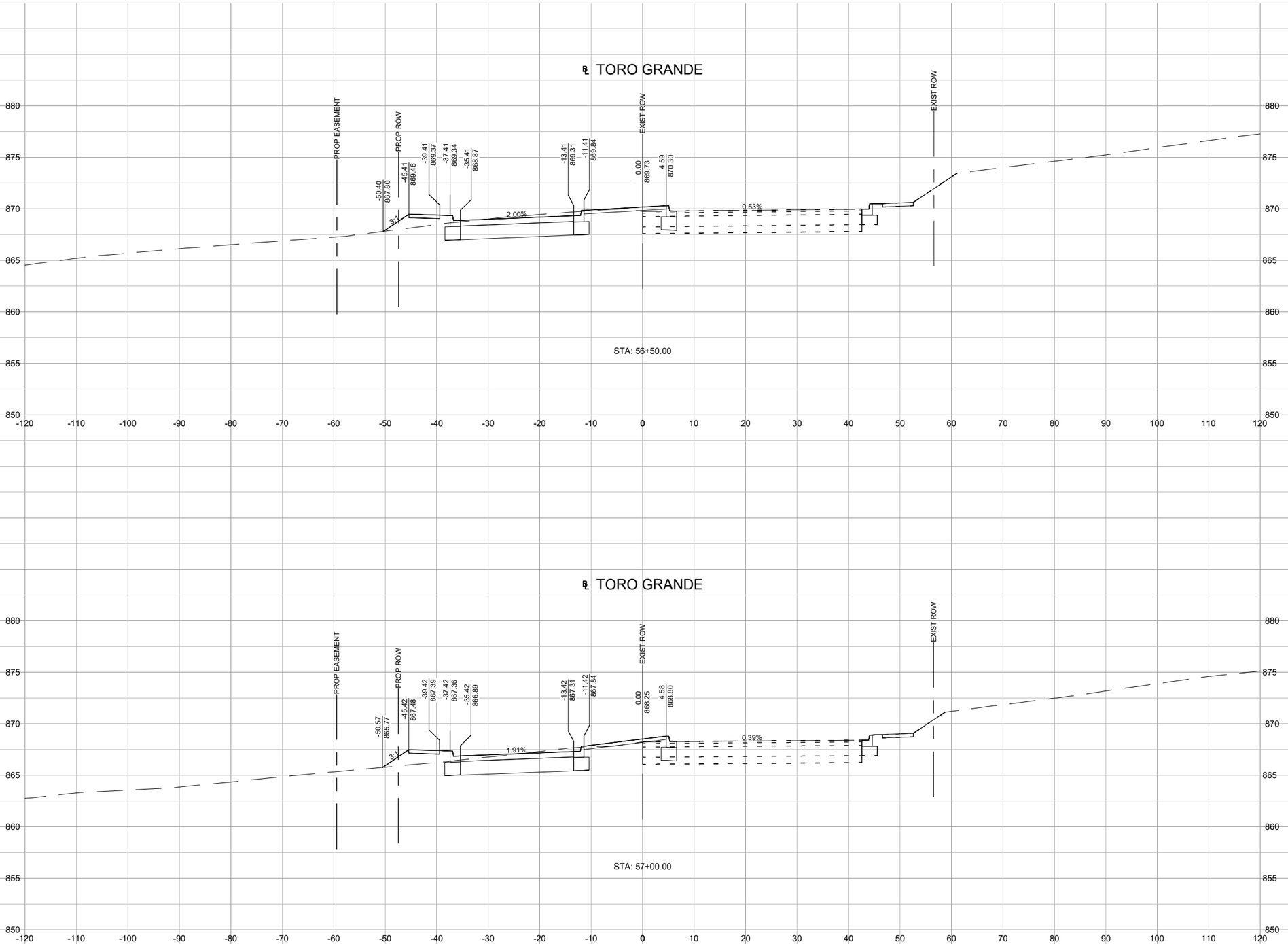
XS-228

Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-29 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



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TORO GRANDE NORTH-XSEC-30

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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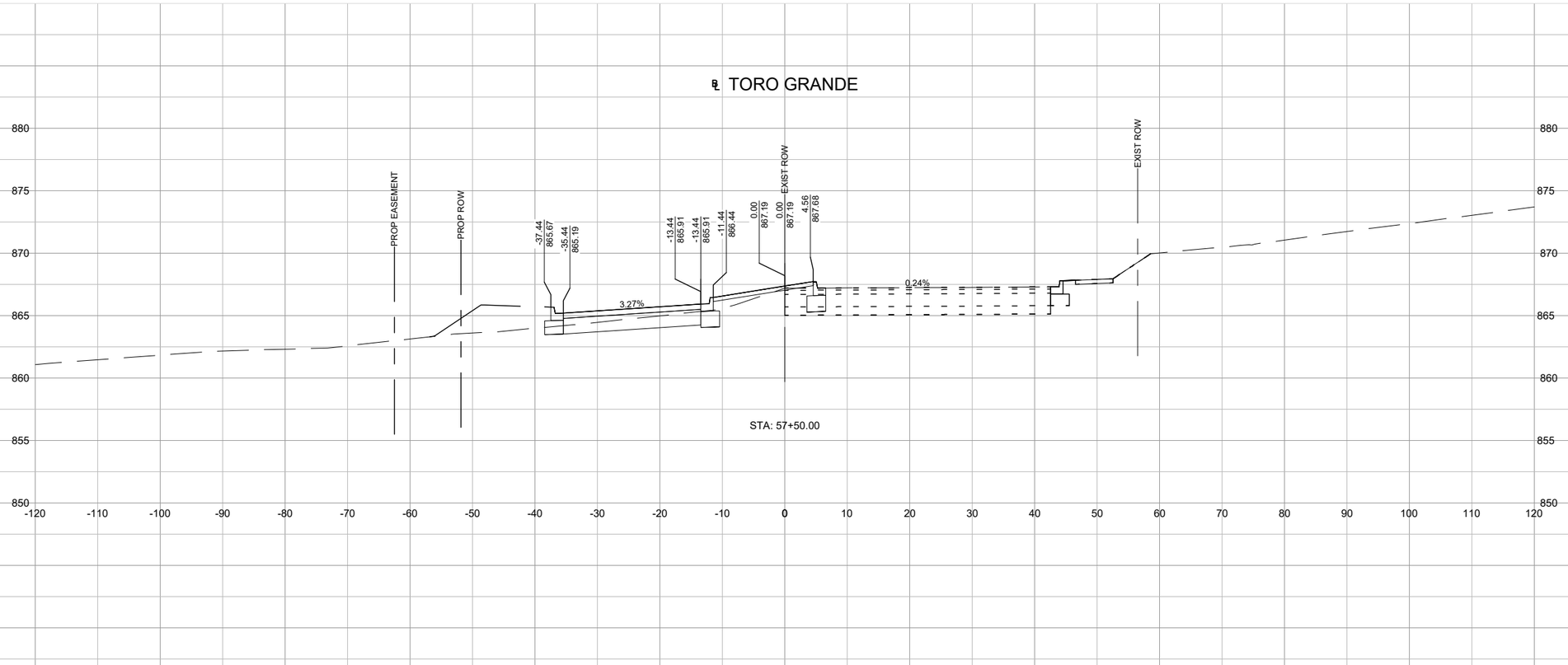
Dwg Info: \\austinserver\common\Projects\2023\12052_Cedar_Park\02_Toro_Grande_North\400_CAD_REF\C-NP-CORR-XSEC-TGN.dwg – Tab: TORO GRANDE NORTH-XSEC-30 – Plotted: 2/12/2025 8:18 PM By: JAVIER HOLGUIN



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TORO GRANDE NORTH-XSEC-31

TORO GRANDE
ROADWAY IMPROVEMENTS
CEDAR PARK, TEXAS

CEDAR PARK

PROJ. NO. 2312-052-02/03
DESIGN: J. HOLGUIN
DRAWN: J. HOLGUIN
CHECK: M. VERHOEF
APPR: J. HASTINGS
DATE: 2/27/2025

STATE OF TEXAS
JULIE D. HASTINGS
88199
LICENSED
PROFESSIONAL ENGINEER
2/27/2025

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